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by Mike Hyrons

Harvard

by David Batt

Plus

- Century Series
- Aviation Colour File
- Vac-form Viewpoint
- Show Report
- Quick Build
- Aero Album

First Yak

by Richard J. Caruana

Volume 5 Issue 2 February 1999 £2.50
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23 PAGES OF NEWS & REVIEWS • MODELS • ACCESSORIES • DECALS

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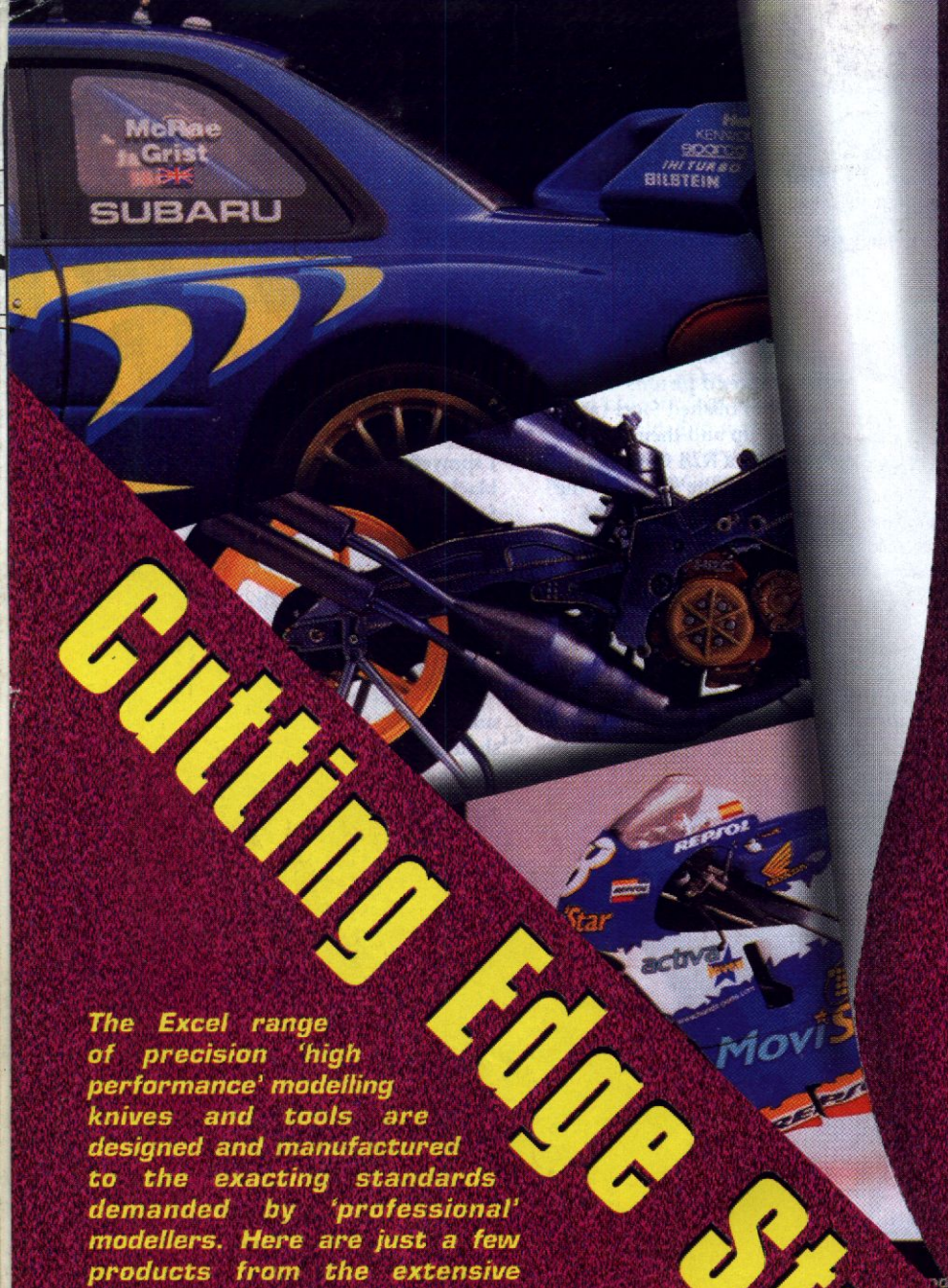

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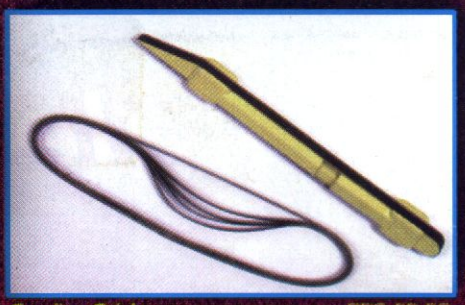

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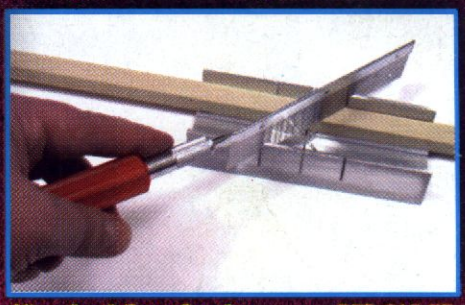

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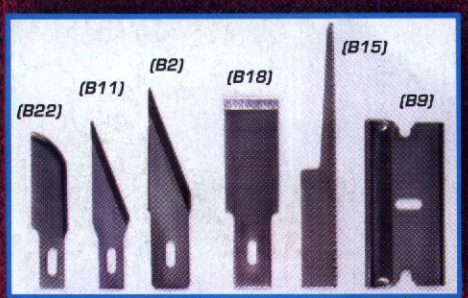

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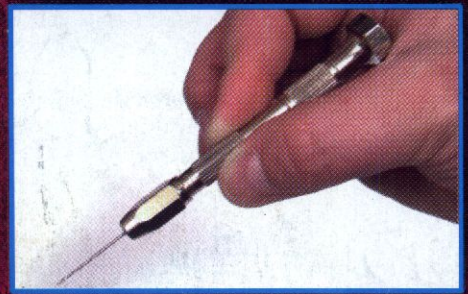

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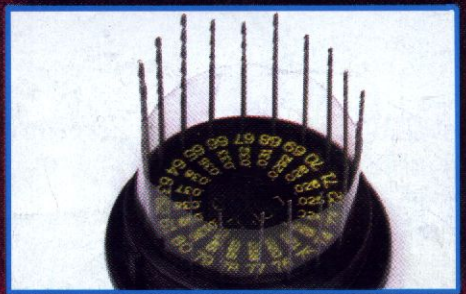

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Please check the advertisements in this journal for all suitable UK sources and only contact the firm directly if it is noted that there is 'no UK source'. We are sorry, but we cannot help with the details of companies which do not advertise in this magazine. *Thank you.*

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Scale AVIATION Modeller International

Editorial

As you will all see, although I welcomed you to last month's 80 page 'bumper' edition, this edition is also in an 80 page format. Over the past three years a lack of space in which to run features etc has always been a big problem for me. With the new year it was decided that we can only continue to offer the depth of coverage we want by making this step, and offering you 80 pages each month from now on. With these extra pages we will be able to offer more build features, better coverage of all the mediums out there and of course include all the up-to-date news on new products, accessories, decals and books. We have a great team of contributors for Scale Aviation Modeller International, and I have not been able to use their work fast enough in the past. With more pages each month I should be able to rectify this and offer you, our readership, greater coverage of the hobby.

As you will also see we have some new feature series starting this month with the 'Eagle's Wings' and 'Century Series'. The former will deal with Luftwaffe aircraft, while the latter is all about the 'Century Series' of American fighter from the 1950's and '60's. You will also find that Ian K. Baker has started a new subject in his very popular Aviation Colour File series, this time dealing with Japanese colour and markings (a subject that is bound to be very popular). New article contributors Mike Hyrons and Steven J. Corvi are making their debut this month, along with Philip J. Moyes, whose excellent photo archive contents will grace our pages every other month from now on. To all of these new contributors a very big welcome from me, and we look forward to their continuing contributions.

It is obvious from the mail and Email I receive that some of you out there have very set ideas about what you like and don't like. Lately certain words seem to have been the problem area. In the past I was told to stop using the word 'sexy' to describe aircraft, as only women could be 'sexy' (think about a Hawker Hunter and say that!). Now it seems that 'source' is not approved of when referring to companies, so I have had to resort to 'company' and 'manufacturer' and the latest one is 'stunning'. I appreciate that you all hate to hear the same word used a number of times, but consider how many items we review each month. If I find products of a similar high quality what do you want me to say, 'nice', 'very nice', 'lovely' etc! I am sorry, but I have words I use all too often, and I am afraid that I will not change. What I will do however is try to minimise the number of times I use the same term in each edition - satisfied?

Well, this month sees a big change in the editorial team that create the title each month. If you look to the masthead alongside you will see that the post of Assistant Editor is no longer listed. This is because with effect from this month Steve Benstead, the existing Assistant Editor, has stood down to take up the reins as editor of our sister magazine, Scale Auto Modeller. Until now I have been editing both titles, but I feel that I cannot give sufficient time to both to do them justice, and I have therefore handed over the editor's task to Steve. This will not mean we will no longer see Steve's work in Scale Aviation Modeller International, as he has his 'Prototypes in Plastic' series to work on and I am sure that he will do the occasional feature from time to time. He also hopes to do a title within our Modellers Datafile series during 1999, and has a few more he is also currently considering (car and aircraft modelling permitting). From me and all our readership I must say a big 'thanks' to Steve for all the input you have had over the past few years and I am sure you will enjoy the challenge of editing Scale Auto Modeller as much as I do with Scale Aviation Modeller International.

Richard A. Franks
Richard A. Franks, Editor

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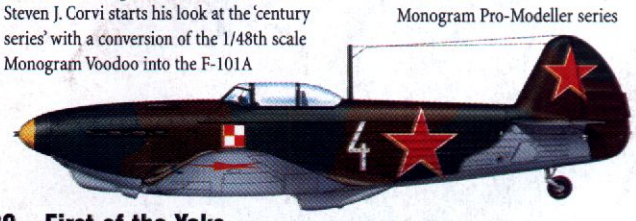

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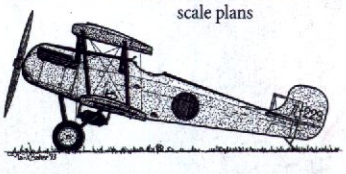

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News Update

MPM

1/48th

To complete their coverage of the Kingcobra a bubble-hood P-63A with RAF markings is due (£15.99).

1/72nd

The next kits in this scale will include the Grumman F3F, Fairey Barracuda, and the Heinkel He 50. A number of the previous kits are also being reissued, but with an upgrade of the interior with new resin parts. The kits that will be included in this are the Kawasaki Ki-64 'Rob', Fokker G-1 'Reaper', FH-1 Phantom 1 and the Sikorsky S.51 Dragonfly.

Minicraft

No, not the kit manufacturer, but the well known tool manufacturer. They have just released a new orbital sander which has not only a palm and pistol grip, but a 'pen grip' to allow precise manipulation of the sander during intricate work.

This sander features velcro-strip fasteners on the sanding pads, which are available in fine or coarse, and it retails for just £39.99.

Planet Models

1/72nd

The next couple of resin kits from this manufacturer will be the De Havilland D.H.108 (£23.00), Focke Wulf Entwurf B3x1000 Delta Bomber (£23.00), Breda 44 (£23.00), S.I.A.I. S.211 (£20.00), Mitsubishi Ki-83 (£29.00), Fokker T.IVA (£44.95) and the Northrop N 1 (£20.00).

Dynavector

1/48th

The excellent new mixed media kit of the De Havilland Hornet F.1/F.3 will be available from this source soon. The kit features an excellent decal sheet, resin, metal and vac-formed components and will retail for £30.00.

Minicraft

1/144th

With the success of the Boeing B737-300, the next two kits from this company will be the Lockheed L188 Electra and the Boeing Stratocruiser. Each kit will be injection moulded plastic and will retail in the UK for £8.99.

Classic Resin Airframes

1/48th

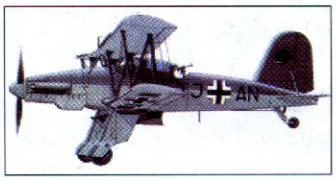
The next resin kits from this company will be the beautiful Loire 46 and the Arado Ar 95. No confirmed UK release dates or prices are available, but we will keep you posted.

Azur

1/72nd

The next couple of kits from this manufacturer will be the Loire Nieuport L.N. 411, Marcel Bloch M.B. 155, the Dewoitine D.371/372 and the Hanriot H.232.

Pavla



1/72nd

The Fieseler Fi 167 is due for reissue from this manufacturer and there will also be new kits of the Grumman F7F-3N Tigercat, Miles Messenger M.38 and the Cessna Bobcat/Crane with USAAC, USAAF, USN and CAF decals.

Hi-Tech

1/48th

For a long time now we have awaited the release of the second full kit from this manufacturer and it is hopefully going to arrive early in 1999. This kit will be of the Breguet 14B and it will retail for £22.50. To follow will be similar mixed media kits of the Dewoitine D.510 and the Morane-Saulnier MS.406, although we have no idea of a UK price on either of these yet.

New conversions will include one to convert the Eduard Nieuport 17bis to a Nieuport 27 and a Camel F.1/3 Nightfighter and a Camel F.1 trainer conversion.

Kendall Model Company

1/72nd

The Boeing 727-200 announced a few months ago is now going to retail for £54.95 in the UK, according to Hannants.

Esci

1/72nd & 1/48th

As an aside to the news of the new UK distribution of this range by Amerang Ltd, it has also been announced that the range of aircraft models from this source will also be re-introduced during 1999. We have no confirmed details as to the extent of this reissue programme, but will keep you advised.

Ocidental

1/48th

The long-awaited Spitfire Mk IX from this manufacturer is listed as due for release in Europe at the end of 1998, although there is no indication of a UK release or price as yet.

Rumours are strong that the next releases from this source will include the high and low-back versions of the Spitfire Mk XVI, the Mk VII and the Mk XI. A Lockheed Harpoon is also being mentioned as well as the entire Fiat G.91 series.

1/72nd

In this smaller scale the Lockheed Harpoon is also a possibility.

Academy

1/72nd

Of the new kits we listed a short while ago from this manufacturer, those that are due for release in the early part of 1999 will include the North American T-6 Texan, A-37 Dragonfly and the Hawker Typhoon. No confirmed UK release dates or prices have been given, but we suspect they will each retail for around £4.99.

Italeri

1/48th

An injection moulded plastic kit of the Bell OH-13 Soiux is due from this manufacturer very soon and it will retail for £7.99.

ERTL (AMT & Esci)

It has been officially announced (9/12/98) that all UK distribution of the entire AMT and Esci ranges will be undertaken by Amerang Ltd. Anyone with questions etc should now contact Amerang on 01903 765496.

Dekno

1/72nd

The next resin, metal and vac-formed kit from this manufacturer will be of the Miles M.3B Falcon VI.

Monogram

1/48th

Back once again from Monogram are the Spitfire Mk II (£7.95), P-47D Razorback Thunderbolt (£7.99) and the AV-8B Harrier II (£11.95).

A-Model

1/48th

The first kit in this scale from this source is the MiG-3 and it retails for £9.99 in the UK. The model is limited run injection moulded plastic and it features rubber tyres for the main and tail wheels. Overall quality looks good, although being limited run cleaning up of all the parts is inevitable.

1/72nd

The next kit in this smaller scale from A-Model is the DI-6sh, although we have no confirmed UK price or release date on this kit. The M-4 'Bison' noted on the A-Model boxes is apparently delayed until 1999 and hopefully the Ka-60, Ka-62, Messerschmitt Bf 109K and FiSK 199 will also be produced.

The entire A-Model range is imported into the UK by Pocketbond Ltd (see Advertisers Index).

Interavia

1/72nd

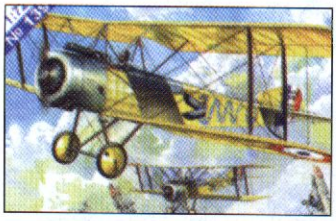
This is a new name to us, although they produce limited run injection moulded kits. Apparently the next two releases from this firm will be the Sukhoi Su-3 and the Piasecki H-25/HUP-2.

There is no UK source for this range as far as we are aware.

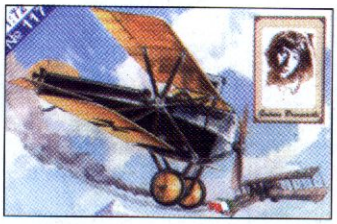
Toko

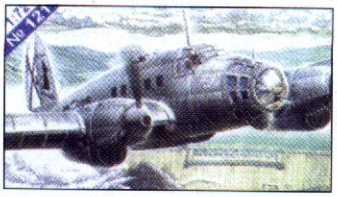
1/72nd

The Nieuport 11 Bebe kit will soon be reboxed and reissued with new parts (armament and skis) to allow a Nieuport 16 to be built. This kit will feature decals for Albert Ball's machine as well as French, Russian Imperial and West Ukrainian Free Air Forces. Hopefully the release of this kit will be in early January.



The release dates of a number of the other kits due from this manufacturer are now a little more defined, with four different boxings (two-seat fighter, trainer, single-seat bomber and night interceptor) of the Sopwith 11/2 Strutter that are due for release in January 1999. These will be followed in February by the Aviatik-Berg D.I and the Hansa Brandenburg D.I. In May the Heinkel He 111 in B, D, E & F versions will be released and in June the C/G version will arrive. No further details are available on the Airco D.H.9 and Gotha II/III/IV/V/Va & Vb we mentioned last month, but we will keep you advised.





1/48th

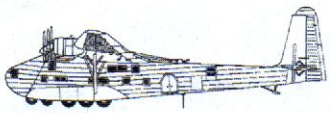
Don't forget that in this larger scale there will be a kit of the Gloster Gladiator and Sea Gladiator during 1999.

Dujin

1/72nd

New resin kits from this manufacturer will be the SNCASE Romano R.82 ET2, Caudron C.510 Pelican, Robin DR.250 Chevalier, Robin DR.300/317 Petit Prince, Robin DR.400, Fournier RF4D and Fournier RF5. Each kit will include resin and vac-formed clear parts, but no decals.

MPM HML



1/48th

The most recent release in the 'Hand Made Limited' range of resin kits from this manufacturer is the massive Messerschmitt Me 323 Gigant (£449.00). This will then be followed by a similar kit of the Arado Ar 240, which will include markings for two machines.

Craftworks Inc.

1/32nd

We forgot to include the full list of new kits due from this manufacturer in our Chicago Toy Fair report a while ago, so to set the records straight the kits due will include the A5M4 Claude, N.A. T-6G Texan, Heinkel He 162 Volksjäger, Messerschmitt Bf 109K, Lavochkin La-5/La-5FN, Aichi D3A1 Val and Arado Ar 234B Blitz.

Apologies to Craftwork for that omission.

Special Hobbies

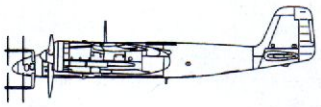
1/72nd

The next couple of mixed media kits from this Czech manufacturer will be the Hughes TH-55A, the Hiller UH-12 (H-23), Dornier Do 317 and the Lockheed Electra. Each kit will be limited run, injection moulded plastic with resin interior and engines, and the first two will also include an extensive etched brass fret.

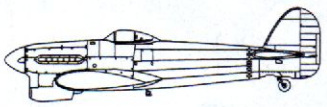
Hasegawa

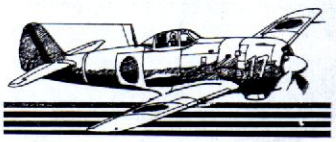
1/72nd

Noted in Japan were the reboxings of a number of the old Heller kits by this manufacturer. So far the Bréguet 693, LeO 45/451 and Potez 540 have been seen and we suspect that these kits are for 'home consumption only', so they will never be available outside Japan.



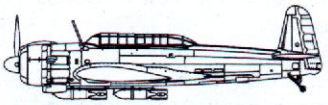
New in 1999 from this source will be two De Havilland Mosquitoes. The B Mk IV (Kit #CP17) and the FB Mk VI (Kit # CP18) are listed, although no release date is available at present. The Focke Wulf Ta 154 will also be released in a 'production' A-0 configuration (Kit # CP16).

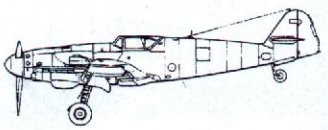




1/48th

It is no real surprise to see that a 'bubble-top' Hawker Typhoon will be released in early 1999 by this manufacturer, as it is a simple update to the existing 'car-door' version already available. A surprise is the release of a new kit of the Nakajima Ki-84-I Kou Hayate (Frank) (Kit # JT67). There will also be kits of the Messerschmitt Bf 109G-10 and K (Kits JT63 & JT64), plus the Nakajima B6N2 Tenzan (Jill) Type 12 (with bombs)(Kit JT62). At last the early Hurricanes have also been confirmed, with the Mk I and Mk IIB (Kits JT65 & 66) being listed.

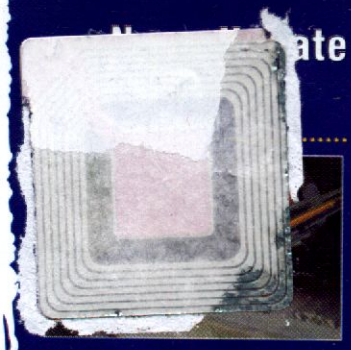




Tamiya

1/48th

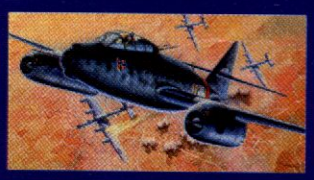
Much has been speculated about what kits this company will be producing in 1999 and we already hinted about an Italian three-engine type a few months back. Apparently the S.I.A.I. SM.79 and the Macchi C.200 are both 'under evaluation' as possible kits in this scale in 1999. We will keep you posted on this as soon as we know more.



1/72nd

The all-new kits of the Hurricane and P-51B arrived just prior to Christmas (see Preview section), and studying the Hurricane it became apparent that other versions may well be on the cards. The cut-out of the lower fuselage area would indicate a Sea Hurricane as a possibility and a close study of the inside of the wing halves shows a prominent 'B' on each. I therefore suspect that the area opposite these (the other side of the wheels etc) contains a 'C' set and therefore a Mk IIc has also got to be on the cards. We may therefore even get a Mk IId and, let's hope, a correct Mk IV. At the moment though I suspect it is a case of 'watch this space'.

As far as the next lot of releases from Revell® go, there should be the Boeing 737-200 (ex-Matchbox), Fiat G 91R1/R3 and Bell UH 1D 'Army' available by the end of December. Delayed to 1999 will be the Messerschmitt Me P. 1099 Heavy Armour.



1/48th

In the larger scale the Junkers Ju 52/3m is listed for release in December, but going by the lateness of the November releases, I suspect it is more likely that this kit will be out in January 1999.

The Rafale Series M has been delayed until 1999, although no indication of when in 1999 has been made yet.

News Update

CDC

1/100th

Once again a number of excellent die-cast display models have been released by this manufacturer.

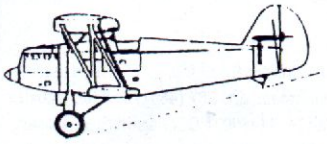
The subjects offered are an Alpha Jet of the Luftwaffe in 'Tiger Meet' markings (Item 5037), an AH-1W Super Cobra of the US Marines (5272), US Marines 'Desert Storm' (5274), AH-1T Sea Cobra US Marines (5270), F-100 Super Sabre in 'Thunderbirds' markings (5190) and, finally, an F-100 in USAF markings from the Vietnam War era (5193).

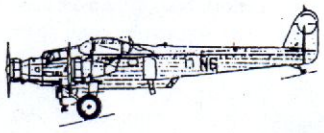
For more information on the CDC range, or details of your nearest stockist, contact Richard Kohnstam Ltd on 01442 261721.

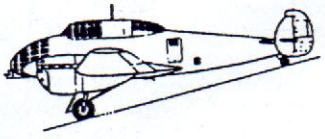
RS Models

1/72nd

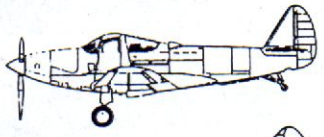
This Czech manufacturer offers resin kits and new releases for 1999 will include the Heinkel He 116B-0, Arado Ar 65, Fokker F-IX, Avia B.158, Praga E210, Avia Bs.122, Avia Ba.122, Avia B.322, Bell XFN-1 Airabonita, Reggiane Re.2007, Lockheed XP-38 and the Messerschmitt Bf 163 (STOL).







New conversions will include those for the Fw 189E (Airfix kit), a seaplane version of the Gotha Go 242G (Italeri kit) and the Dornier Do 217P (Italeri kit).



Air Collection

1/48th

Some may recall the Vultee P-66 kit from this source that was previewed a while ago (See Vol. 4 Iss. 9 Page 556). Similar kits of the Heinkel He 114, Polikarpov Po-2 and the PZL P-24 are also due for release by this company.

1/72nd

In this scale a Vultee P-66 Vanguard and an IAR.80 are also listed.

There is no UK source for this range yet, so contact the manufacturer at:

Air Collection, OW Kagero, ul. Lazimierza Wlk 39, 27-600 Sandomierz, Poland.
Tel: 0-15 8324201
Tel/Fax: 0-81 742 20 67

Spin Models

1/48th

The Ansaldo SVA.5 from this manufacturer arrived in the UK in early December and on inspection it looks of good quality. The main components are resin, but there is a fret of etched brass detail parts and excellent decals for a number of Italian options.

This kit retails for £24.95 in the UK.

Sky Models

1/48th

The news about this manufacturer is that in 1999 they will be producing the Agusta A.109 as a resin kit in this scale.

1/72nd

In the smaller scale a resin kit of the Piaggio PD.808 is also due.

Hit-Kit

1/72nd

New limited run injection moulded kits from this firm include the Ansaldo SVA.9 and SVA.10. These will be followed in the new year by similar kits of the Fiat G.50, and possibly the Ansaldo A.300 and Macchi M.9.

Kangham

1/32nd

This is a new manufacturer, from China we think, and looking at the first couple of releases from them, it seems as if they may be license copies (or not) of certain Japanese manufacturers' kits. In this scale there is a Northrop F-5E which retails for £14.99.

1/48th

In this scale there is an F/A-18Hornet, which retails for just £7.99.

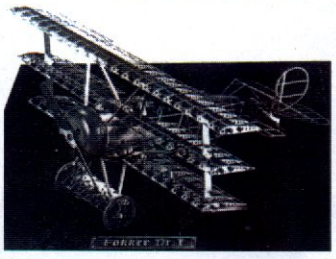
1/72nd

In the smaller scale there are kits of the RA-5C Vigilante (£4.99), Sukhoi Su-25 Frogfoot (£4.99) and the A-4E/F Skyhawk (£3.99).

AeroBase

1/72nd

This is a new firm from Japan that are offering 'skeleton' airframes of certain types made up of etched metal. The kits are similar to the Eduard 'Strip-Down' series, but utilise no injected parts. So far in this scale the only release is the Ryan NYP



1/48th

In the larger scale a kit of the Wright Flyer and the Fokker Dr.I have been produced.

1/160th

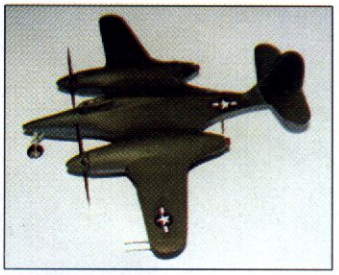
In the 'microWING' series a tiny little kit of the Bleriot XI has also been made.

Each of these kits require no gluing or soldering, as the etched parts include tabs which lock into corresponding pieces, and going by the examples we have seen in their brochure, they make up into excellent models. There is not UK source for this range currently, so contact them directly at; AeroBase, 2-26 Takajo machi, Wakayama-City, Japan.

Combat Models

1/48th

The most recent vac-formed kits from Combat include the Blohm & Voss Bv 238, which retails for $54.95 plus shipping and the Fairchild C-123 Provider which is $36.95 plus shipping.Also now available in this scale is the XP-67 Moonbat.



1/32nd

In this bigger scale the most recent release is the Gotha Go 229 and this kit retails for $32.95 plus shipping.

The next release in this scale will be the Blackburn Firebrand

1/72nd

Due in the future in this scale will be kits of the Dornier Do-X, C-17 Globemaster II and C-133.

For more details of the Combat range contact them at; 400 3rd Street, West Easton, PA 18042, USA.

CMK

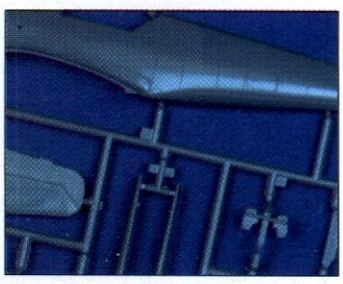
1/48th

The most impressive conversion set from this firm is for the Beaufighter Mk IIF. The resin, etched brass and vac-formed clear set is designed for the Tamiya Mk VIf kit and it retails for £14.95.

Correction

Some of you will have noted that the sprue close-up with the Re-issue Review of the Messerschmitt Bf 109E-3 on page 64 of last month's edition was incorrect.
The correct image appears here.
Apologies to Amerang and our readership for this error.

Richard A. Franks, Editor

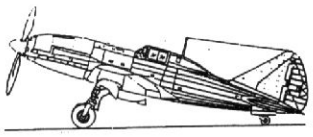


LF Models

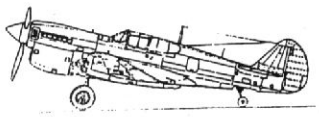
1/72nd

This is a manufacturer from the Czech Republic that has just come to our attention. They offer resin kits and conversions in 1/72nd scale and so far their range includes the following:

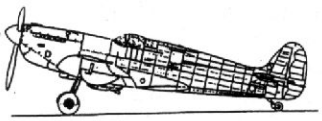
- 7201. IAR. 81C
- 7202. TP-51B (converts Airfix kit)



- 7203. Junkers Ju 88A-1 (converts Italeri kit)
- 7204. Hawker Tempest Mk I (converts Heller/SMER kits)
- 7205. Messerschmitt Me 210A-0/A-1
- 7206. Curtiss TP-40N (converts Hasegawa kit)
- 7207. Curtiss P-40M (converts Hasegawa kit)

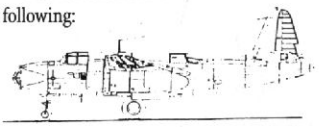


- 7208. Reggiane Re 2005
- 7209. Junkers Ju 88P-1 (converts AMT/Italeri kits)
- 7210. Heinkel He 111P-1 (converts Italeri kit)
- 7211. IAR. 80A
- 7212. Arado Ar 66C
- 7213. Hawker Tornado (P5219)
- 7214. Fairey Firefly NF Mk II (converts Novo/SMER kit)

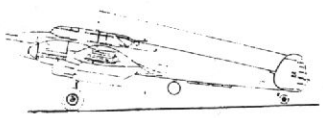


- 7215. Spitfire PR Type I, C, D & F (converts Hasegawa kit)
- 7216. Fairey Firefly T Mk 1/2 (converts Novo/SMER kit)
- 7217. Heinkel He 111F-4 (converts Italeri kit)
- 7218. Ambrosini SAI. 207
- 7219. Fiat G.56
- 7220. Mitsubishi Ki-83
- 7221. Douglas DB-7 (early)

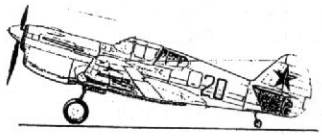
Due for release in 1999 will be the following:



- 7222. Boston Mk I Turbinlite
- 7223. IAR. 81DC
- 7224. SFKB Ka-309 Papagal
- 7225. Curtiss P-40M-10/15/20



- 7226. Messerschmitt Bf 110B01
- 7227. Letov S.328F
- 7228. Curtiss TP-40M
- 7229. Messerschmitt Bf 110A-0
- 7230. Junkers Ju 88B-0

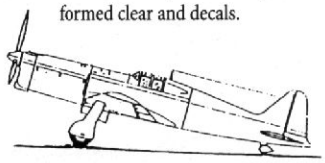


- 7231. Curtiss P-40E with Klimov M105 engine
- 7232. Letov S.331

Each of these is a complete resin kit with decals, photo-etched and white metal detail parts and vac-formed canopies etc.

1/48th

Due for release in this scale will be the Ambrosini SAI 207 (4801) and the Jakovlev Jak 26-3 (48002). Once again these kits are resin with etched brass, white metal, vac-formed clear and decals.



Currently there is no UK source for this range, so contact the manufacturer directly at:

LF Models, Gagarinova 10, 787 01
Sumperk, Czech Republic.
Tel: ++420 649 221232
Fax: ++420 649 212139
Email: fofi@sumperk.net.cz

Correction

We have received comment from Roderick McQueen in regard to David Francis' review of the InTech F-16B that appeared in the November issue (see Vol 4 Iss 11 Page 694).

He states that in 1980 two aircraft from the 388th TFW at Hill AFB (F-16A, 78-0008 and F-16B 78-0096) were painted in a green/grey experimental camouflage scheme, not green and brown as depicted in the kit and David's review. The FS colours given for this scheme were 34092 (green), 34102 (green) and 36081 (grey). This scheme was known as 'Charcoal Lizard' and photographs of 78-0096 appear in World Air Power Journal Vol 5 Page 90 and F-16 Fighting Falcon (Detail & Scale Vol 3).

Roderick also states that the red fin stripe indicates that the aircraft was operated by the 34th TFS, not the 4th TFS and the Tactical Air Command badge should be in full colour, and not 'low-vis' as given in the kit.

Our thanks to Roderick for taking the time to raise these points with us, and I hope they are of use to any of our readership who are currently working on this kit (or any of its other incarnations!).

Richard A. Franks, Editor

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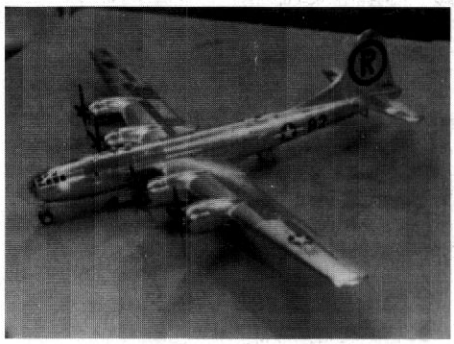

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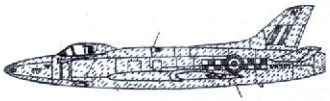
Supermarine Swift F.1



Technical Data
Manufacturer: Magna Models **Scale:** 1/72nd
Price: £19.99
Type: Resin and White Metal
Parts: Resin 13, White Metal 12, Vac-form Clear 2
Decal Options: None
Distribution: Magna Models

The Kit

As with the F.7 kit I built last year, this kit consists of resin parts for the main fuselage and wings with white metal parts for the details such as the undercarriage. The panel lines are lightly recessed on the resin parts and were clearer than the previous example and the white metal parts needed only the lightest of flash removed. This version does not have the choice of resin or white metal wheels, only the resin versions are supplied.

Instructions

The instructions consist of four sides of A4 which cover the aircraft history, basic resin modelling notes, roughly scale diagrams with colour schemes and construction notes. Basic colour instructions are given with no BS/FS numbers and the instructions give enough information for construction, and detail all the drilling and placements required.

Construction

The resin castings had no bubbles but needed cutting from their blocks and cleaning up. The modestly detailed cockpit now comes as a separate plug to fit within the fuselage halves and this can be highlighted by dry brushing later. With less cleaning than last time I achieved a very good fit on the main parts and main undercarriage. The main undercarriage doors are a slightly different shape to the cutouts in the wings, and therefore required some filing to correct. Two vac-formed canopies are provided which always ensures it goes right first time! The wing fences need to be scratch built to the profile on the instruction sheet and finally I added the aerials from old guitar wire. When checking photographs for the paint scheme, I discovered that the two fuselage vents on the upper starboard side should be removed and one added on the upper port side to be an F.1.

Accuracy

The finished model measured 130mm wingspan and 175mm long which scales out as 30' 9" by 41' 3" against 32' 4" by 41' 5.5" given in Putnam's "Royal Air Force Aircraft since 1918"; this is much closer than the F.7 however. The overall look was much better although I still think the canopy needs work to get the correct profile.

Colour Options

The instructions provide details of one aircraft; WK207 of No.56 Squadron, RAF Waterbeach, 1955. This aircraft is in overall silver with roundels and checker board markings. Other photographs show No.56 Squadron aircraft in the green/grey camouflage scheme. However, I've finished my example as WK194, the first production F.1 which never reached squadron service and was finished in overall silver.

Decals

No decals are supplied.

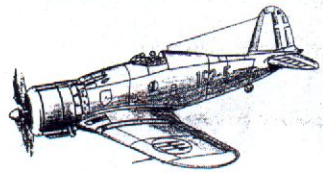
Conclusions and Recommendations

A little time spent in cleaning the parts can make a good model of this, the first of the Swift variants. The surface detail is fine and although resin does take time to cut and clean, the kit is not difficult. An enjoyable kit to build and overall a 'recommended' rating.

My thanks to Magna Models for the review sample.

Paul G.Gilson

Fiat G.50bis/ bisA.S



Technical Data
Manufacturer: MisterKit **Scale:** 1/72nd
Status: New Tooling **Price:** £TBA
Type: Resin, Metal & Vac-formed Clear
Parts: Resin 51, Metal 6, Clear 2
Decal Options: 2
Manufacturer: MisterKit, Via Monte Amiata 31, Rozzano, Milano, Italy. Tel/Fax: 0039- (0)2-8243791
UK Importer: N/A

The Kit

The kit comes in a rough-looking corrugated box containing resin and white metal parts in abundance to make most versions of this famous Italian fighter. There are two cowlings for the standard or tropical versions, two spinners for early and late versions, a full cockpit 'tub' with etched brass trim wheel, resin bucket seat, instrument panel and so on. All the control surfaces are moulded separately as are the four-part flaps. The cockpit doors are similarly treated and the kit even features 'flattened' tyres on the wheels. There is really no scope for the cottage industries 'alternative' parts with this one, the kit has the lot.

The Instructions

It is a shame the same cannot be said for the instructions. The A4 sheet contains an exploded construction diagram to show where all the parts go but the colour sheet, apart from being solely in Italian, is poor in quality and content and the manufacturer obviously intends the modeller to seek out his own finishes for the model. There is a short explanation of the manufacturer's intentions, included with the instructions with regard to this kit, it being the first of a new series that aim to be "a definitive interpretation of the Fiat G.50 in 1/72 scale". At first glance I'm not going to argue with that.

Construction

Some extra research into the interior colours and finish of this aircraft will be essential as the quality of all the mouldings is so good. I finished my interior in a variety of greys and since I intended to model the machine with 'it all hanging out', cockpit doors included, time spent on details would be worthwhile. The overall construction is very good and has very few weaknesses, so I'll only highlight those which could cause a problem. A little filler was required on the wing roots to cover a small gap, but otherwise the model needed no filler. A dry fit of the white metal engine and exhaust ring is recommended as I found these a little oversized to fit inside the cowling as supplied. I replaced the prop shaft with a longer length of wire and drilled out the back of the prop to get a better physical join between these parts. The undercarriage doors are very finely moulded and the smallest, (top) ones are easily lost to the ever-hungry carpet, so beware!

Accuracy

My finished model measured out at a touch under 116mm in length and a touch over 152mm in span. Since the original had a length of 8.29m and a span of 11m then the model is dimensionally accurate. I used the Aviation News plans in this scale as they appeared in the May '84 (Vol 12 No 24) issue and the overall outline is as good as it gets.

Colour Options

The instructions give two examples, both with light grey undersides and sand uppersurfaces, one with Medium Green mottle and another with green and rust red mottle. The decals give codes for 152 and 160 Squadron machines, but there is little else in the way of colour notes which is a shame as the quality of the kit really does deserve it. I guess this is where the cottage industry can step in and fill the gap. The option I had plumped for was a 152 Squadron machine of the bis/ AB variant in order to utilise the tropical cowling, having a number of the smooth cowled G.50's in my collection already. This was finished with the two-tone green and red mottle with a single white fuselage band and white spinner.

Decals

These are excellent. Well printed and easily applied to the model's surface with no need for solvents etc. A full series of individual aircraft numbers (0-9) are supplied for both aircrafts' squadron code and its serial number and those left over will make a welcome addition to the spares box.

Decal Rating = 10/10.

Conclusions and Recommendation

If this is the first in a series, I can't wait for the rest. The end result definitely lives up to the manufacturer's aspiration and when my finished example was placed alongside the other G.50's in my display cabinet, its pedigree becomes even more evident. The model is still relatively simple to build and I would recommend it to all skill levels. The only thing that lets the kit down is the instructions and colour sheets. Some additional research at the library or through your own magazines will be necessary. A cue for one of Richard Caruana's excellent feature articles here I think!

Highly recommended.

My thanks to MisterKit for the review samples.

Dan Claxton

McDonnell XV-1 Convertiplane

Technical Data

Manufacturer: Glencoe **Scale:** 1/32nd
Price: £10.99 **Origin:** ITC (USA)
Type: Injection Moulded Plastic
Parts: Plastic 55, Clear 7 **Decal Options:** 1
Manufacturer: Glencoe Models, Box 846, Northboro, MA 01532, USA
UK Importer: Pocketbond Ltd

The Kit

This kit is a real oldie, dating back to the 1950's, when it was originally released under the ITC label.

Fifty-five parts are moulded in grey plastic, plus seven clear parts. Surface detail is raised, with a profusion of large rivets, and smooth areas where the original, raised marking locations have been removed from the moulds.

All parts are heavily flashed, and there are several prominent sink marks. Three rather malformed air and ground crew figures are supplied, as well as a mystery part, (part 51), which I assume was originally part of a display stand, as there is a slot for this under the fuselage.

Instructions

These are presented on two, double-sided sheets of A4 paper. A brief history of the type is given, as is a sprue map. Exploded diagrams cover assembly over four stages and, while these are reasonably clear, they are not particularly well drawn. Detail painting is called out during assembly, with an FS number given for the interior colour; no reference is made to commercial paint ranges.

Finally, a three-view drawing provides the overall colour scheme and decal locations.

Construction

All parts have to be prepared for assembly by removing flash and general cleaning up of mould lines, ejector pin marks, sink marks and so on.

General fit of parts is poor, with a great deal of trimming and adjusting of parts needed to achieve an acceptable fit. The wing to fuselage joints were particularly bad, requiring a lot of filing, and plenty of filler, to blend everything together. The ailerons (parts 31) were too short in span, and plastic card fillets were used to close the gaps. Incidentally, the aileron mass balances (parts 50) are not shown in the instructions at all; they actually go on the upper surface of each aileron.

Cockpit and cabin detail is very sparse, and there is plenty of scope for the modeller to add more; for the purposes of this review, I simply added harnesses and buckles from the Reheat range.

I couldn't live with the horrible raised surface detail and sanded the whole lot off, replacing it with a representative selection of scribed panel lines.

Accuracy

Although the kit scales out very well according to the dimensions given in Rene Francillon's 'McDonnell Douglas Aircraft Since 1920', there are a number of areas where it appears inaccurate. As a whole, the kit seems to represent the second XV-1, with the bulged rotor housing and longer skids; however, the skids are far too bulky in the kit, and the rotor housing bulge is too small and the wrong shape. The second aircraft also had a long, nose-mounted pitot tube, unlike the item supplied in the kit.

In view of these anomalies, and the fact that the kit decals are for the first XV-1, I decided to omit the tail rotors and live with the other differences, utilising the kit decals.

Colour Options

As discussed, just one option is provided, for the first XV-1, 53-4016; this machine is now preserved at Roft Rucker, Alabama.

The model was primed with Halford's acrylic grey primer, over which I sprayed Nissan Silver from the same range. The red bands and the rotor tips, as well as the propeller tips, were sprayed Humbrol 60 (Scarlet).

The instruction sheet suggests Light Blue FS 35622 for the interior, but I felt the standard US Interior Green, (Xtracolor X117), was more likely, although I could be wrong...

Decals

These are printed by Superscale, and are of very high quality; they are glossy, perfectly printed and settle onto the model with no fuss at all. A coat of Johnson's Klear/Future seals them in nicely.

Decal Rating = 10/10

Conclusions/Recommendation

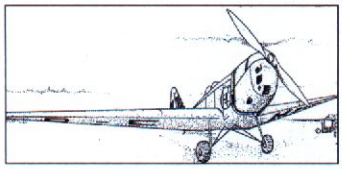
Not an easy kit to build and one which would need a lot of work to produce a really accurate model. However, it's a subject which is unlikely to appear in any other range and it does (eventually) make up into a very attractive model.

Recommended, therefore, to the enthusiastic modeller.

My thanks to Pocketbond Ltd. for the review sample.

Paul Lawson

Klemm Kl 25



Technical Data

Manufacturer: Lumír Vesely
Scale: 1/48th **Price:** £TBA
Type: Resin & Etched Brass
Parts: Resin 22, Etched 2 **Decal Options:** 1
Manufacturer: Lumír Vesely, Konevova 174, 130 00 Praha3, Czech Republic.

The Kit

The kit comes in 22 blue-green resin parts, with two etched brass instrument panels. After minimal cleaning up, the parts look quite good with lightly recessed panel lines. A small sheet of acetate is provided for the two windshields.

Instructions

These come as a single, four-panelled sheet giving a 3/4 front view, a port side view, and exploded view for assembly and nine lines of text covering history, colour scheme and references. This is probably adequate for the experienced modeller.

Construction

The construction is very straightforward with a minimal amount of filler required on most of the joins. The tail assembly is the only real exception to this as it is a poor fit requiring part of the fuselage to be carved out to accept the parts. A lot of filler was used here. The wings butt on quite cleanly and the upper fuselage decking is also a good fit. The undercarriage is a bit tricky with no locating points for the struts and no clear indication of location on the instructions. Also the undercarriage struts look very thick and would probably be best replaced with a mixture of thick piano wire and brass tube. After painting the model, the windshields were cut from the acetate sheet and added to the model. There is no template provided so take your best guess and good luck. Final touches were the propeller and wheels.

Accuracy

Sorry, but I have no information on this particular aircraft so I can't comment on its accuracy, but it does look right when compared to photos.

Colour Options

Only one option is given for a pre-1940 machine finished in overall silver and coded PF+VJ. I used Halford's acrylic Nissan Silver for this.

Decals

The decals supplied with this kit are excellent, the register being perfect with clean sharp edges and minimal carrier film. When applied, the decals are very thin and adhere to the model perfectly without any need for decal solutions.

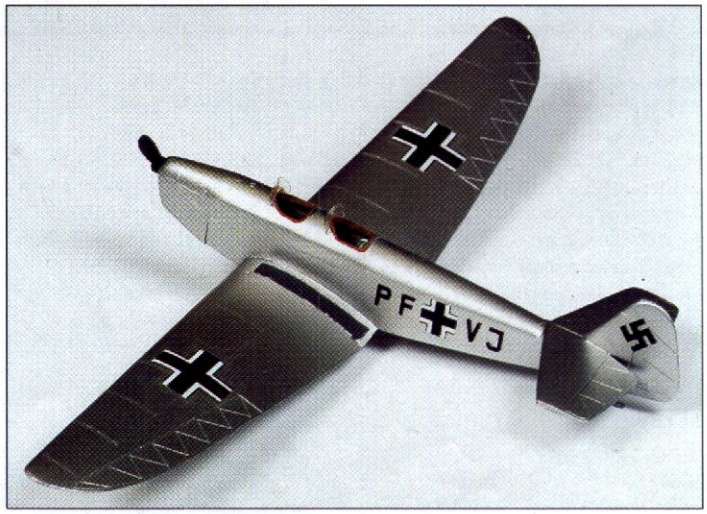
Decal Rating = 10/10

Conclusion & Recommendation

Quite a nice kit of an important aircraft during the Luftwaffe's formative year. There are no real difficulties with this kit and, except for the undercarriage, the end result looks pleasing. Any collection of 1/48th scale Luftwaffe aircraft must have a Klemm K1 25 in it. A very nice kit. Recommended, but not for the novice.

My thanks to Lumir Vesley for the review sample.

Gordon King
Photography by Alasdair King



Siemens Schuckert D.III/IV

Technical Data

Manufacturer: Toko **Scale:** 1/72nd
Price: £5.95 **Parts:** Plastic 37
Type: Injection Moulded Plastic
Decal Options: 2 (Udet & Lerner)
Manufacturer: Toko, Experimental Industrial Technologies Plant JNT STK, 46, Mashinobudivna, 252180, Kiev, Ukraine.
UK Importer: Pocketbond Ltd

The Kit

What you get when you open the box are two pale grey sprues (or black, I had one of either), including enough parts to build the D.III or the similar D.IV, the variant parts are clearly marked on the instructions. All parts are nicely detailed, with very fine inscribed panel lines. The ribbing detail is a little non-descript, however. The plastic Siemens-Halske rotary, and the twin Schwarzlose machine-guns are especially nice, complete even down to the cocking-handle on the guns.

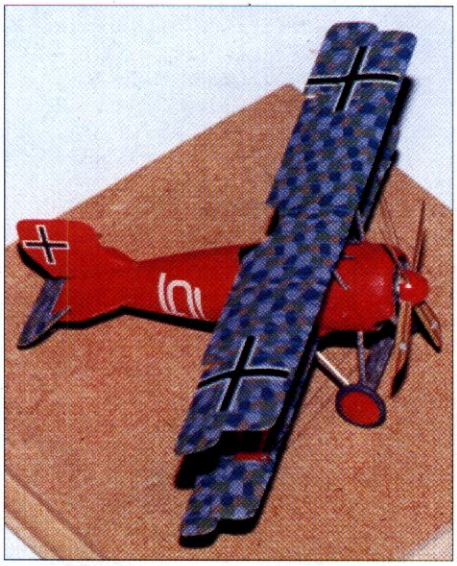
Instructions

The instructions consist of four sheets printed in Ukrainian, English and German, with a numbered sequence (1-7), painting and decal plans for the two variants, and a diagram of the location of the parts on the sprues.

Construction

This kit is very straightforward to put together in the D.III version. Inevitably, construction starts with the cockpit, which is given some detail: you get a floor, seat, control-column, complete with spade-style grip, and rudder pedals. The cockpit frame is represented by raised detail on the cockpit sides. All in all, not bad, but there is scope for detailing if your tastes run that way. The fuselage sides were painted tan, to represent the unpainted ply of the fuselage cladding. The engine assembly presents no problems, with a pin going through the firewall, through the engine, through the characteristic metal frame on the front of the Siemens cowling and into the propeller, keeping those of you who like your propellers to go round happy. Again, alternative spinners are provided for the D.III or the D.IV.

The fuselage halves are then glued together, the alignment checked, and then taped together. Once this is thoroughly dry, the join line is sanded off. After this, you will need to rescribe the fine panel lines, using a sharp, fine blade. The lower wing moulding is then attached. For the D.III, this part fits reasonably well, although the wing roots need a little cleaning up once the wings are on. For the D.IV, which had narrower chord wings set further forward, you will need to remove the part of the wing root that is moulded onto the fuselage, sand the area, and then re-scribe the panel lines. Not particularly time-consuming, but a little fiddly. The engine and cowling are then attached, as are the machine guns (the belt feeds are moulded onto the fuselage) and the tailfin appropriate for the aircraft being built. The one-piece tailplane is then attached. This slides along a slit in the fuselage sides. This tailplane moulding also carries the tapered end of the fuselage, and this needs great care in aligning it with the rest of the fuselage. Both of mine needed a little filler at this stage. The undercarriage goes together with no problems, and easily locates on the bottom of the fuselage. The final stage is to attach the tailskid and the upper wing. Unlike many other quality WWI kits, Toko provide you with very fine interplane and cabane strut mouldings, rather than the usual aerofoil strut. The upper mainplane of the D.III was attached with no problems. The D.IV was much more problematic, needed bending and trimming of the interplane and cabane struts to achieve a remotely accurate fit. You also need to make sure that you have got the right struts for the D.III or the D.IV.



Accuracy

As far as I can tell, the kit is nearly spot on in its major dimensions: the struts on the D.III need a little trimming to bring the wing slightly closer to the fuselage. The kit certainly captures the tubby appearance of the Siemens-Schuckert fighters. The aircraft is tiny, smaller even that the Fokker Dr.1, but Toko have got the very aggressive feel of these fighters well.

Colour Options

Two, one each for the D.III and the D.IV are offered. The D.III is Ernst Udet's distinctive bright red aircraft, whilst the D.IV is for the more sombrely painted machine of Alfred Lerner. Suggested colours are given Humbrol numbers, although I am sure everyone has their own preference. I'm pretty certain that the tyres should not be gloss black, but dark-grey.

Decals

In terms of decal provision, Toko have done us proud, supplying enough four-colour lozenge, cut to shape, for both the D.III and the D.IV, plus the rest of the insignia (crosses, werk. nr., the name of Ernst Udet's girlfriend!) Unfortunately, Toko have supplied underside lozenge for both upper and lower surfaces. The colour of the lower wing lozenge also leaves a lot to be desired, containing, to my mind, too much yellow. There is no way around this, you will have to buy a sheet of upper-wing lozenge, either from Pegasus, Blue Rider, or Superscale. However you do this, it will pretty much double the cost of the kit. The remainder of the decals are very nice, and go on well, which makes the error concerning the colour all the more frustrating.

Decal Rating = 5/10.

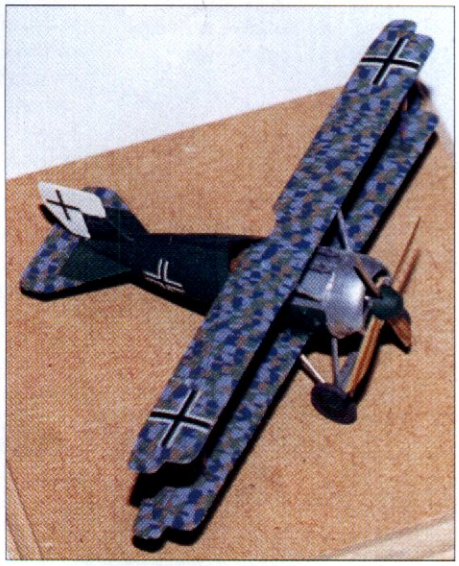
Conclusion & Recommendation

This is a very enjoyable and straightforward kit, and both versions took a week and a bit of evenings to complete. It is really a kit for a D.III, with enough parts to make a D.IV, with a bit more work. The kit's quality approaches that of Pegasus and MPM, without the metal parts, but is considerably cheaper, and, if the lozenge decals are included, the kit offers considerable value for money.

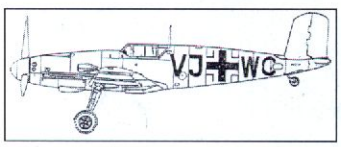
With the exception of the decals, this is an extremely good debut from Toko. The fit of the parts is not always what it should be, especially around the tail, but nothing that cannot be sorted out. The kit is similar to a Revell WWI kit in terms of the skill required to build it, but the end result is much nicer, and provides a welcome alternative to the Fokkers and Albatrosses offered by other manufacturers.

My thanks to Pocketbond Ltd. for the review sample

Charles Onsley



Messerschmitt Bf 109G-03 'V-Tail'



Technical Data

Manufacturer: RV Resin **Scale:** 1/72nd
Price: £TBA **Decal Options:** N/A
Type: Resin & Vac-formed Clear
Parts: Resin 41, Vac-Form 1
Manufacturer: R.V. Resin, Udánky 7, 571 01 Moravská Trebová, Czech Republic.

The Kit

It comes in R.V.'s standard sand-coloured resin with fairly crisp panel lines and surface detail. Most of the parts are packed separately in plastic bags to prevent damage as most are very fine and therefore easily damaged. One vac-formed canopy is supplied but this is so bad that the best place to keep it is in the large plastic box outside that is collected by the local council.

Instructions

These come on one, double-sided sheet. Side one consists of a series of rough, exploded views, plus a short history in Polish, and side two is a three-view drawing giving colour details and markings. Adequate, but no precise locations are given for parts during construction.

Construction

The kit looks excellent in that it is broken down in exactly the same way as an injection-moulded plastic kit. In fact some of the parts bear more than a passing resemblance to a certain Japanese kit while other parts may well find their kin in a well known Italian kit, even down to the fact that certain faults are identical. Read into that what you will.

After cleaning up, the cockpit interior was assembled and painted. The fuselage halves were then mated together and the top decking added to the forward fuselage. All the gaps, and there are plenty, were filled using Squadron White Stuff. The wings were added next after 1mm was removed from the roots. This gives the correct dihedral. The wheel-wells were next extended in towards the centre line to locate the legs in the correct position as the original position is too far outboard (as in a certain Italian kit!). The tailplanes were now added using the drawings on the instruction sheet as a guide. This was followed by the addition of the exhausts, undercarriage, propeller and super-charger intake. In general, the fit of all parts is bad, requiring a great deal of filler on all the major joins as well as most of the minor

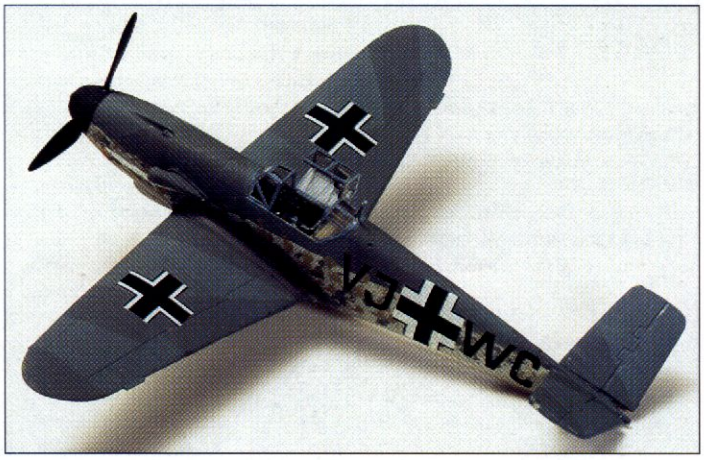
ones. A canopy from the spares box was then added and the model was painted. Aerials were added from 0.09mm fishing line.

Accuracy

Using plans drawn by Mark Rolfe for the Messerschmitt Bf 109G, the kit sits almost exactly over them, except for the tail area. As I have no plans for this area, I cannot comment on the accuracy of the tail except that, compared to the very few photos I have seen of this aircraft, the tailplanes look too big. This is only an impression and can by no means be considered an accurate assessment as no direct comparison can be made.

Colour Options

A single option is given for the prototype, VJ+WC, 14003, finished in 74/75/76 with the propeller and spinner in 70. The numbers quoted are RLM numbers and all paints came from the AeroMaster Warbirds Acrylic Luftwaffe range.



Decals

No decals are provided in the kit so these obviously have to come from the spares box.

Conclusion & Recommendation

Well this is one hell of a lot of work to produce an aircraft that could very easily be converted from any kit of an early Bf 109G. Also, the wheels don't look quite right, appearing over large and the aircraft doesn't seem to 'sit' like a 109. Buy it if you must, but I personally would take the easy option and convert a standard 109.

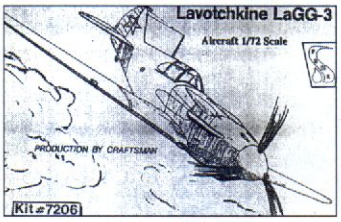
Only recommended to the more masochistic amongst us and definitely not for the novice.

My thanks to R.V. Resins for the review sample.

Gordon King

Photography by Alasdair King

Lavochkin LaGG-3



Technical Data
Manufacturer: Pend Oreille Model Kits
Scale: 1/72nd **Status:** New Tooling
Panel Lines: Engraved √
Fabric Effect: Raised √ **Price:** $27.00
Type: Resin, White Metal & Vac-formed Clear
Parts: Resin 26, Metal 5, Clear 2
Decal Options: National Insignia Only
Manufacturer: Pend OREILLE Model Kit, P.O. Box 9967, Spokane, WA 99209-0967, USA

The Kit

The kit comes in a very small stout white box and contains instructions, the resin parts (the small parts being in a plastic bag), two vacuum formed canopies (again in a bag) and another bag containing the small white metal parts.

The parts are already removed from the casting blocks so there is only a little trimming and a small amount of flash removal to do. The cockpit sidewalls, floor and interior details need to be gently sanded off their backing sheets and have nice surface detail. The wings and fuselage have finely engraved panel and control surface detail. The white metal parts are nicely detailed with very little flash.

No decals or pilot figure are included with the kit.

Instructions

The instructions are on six sides of A4 photocopied paper. The first page gives the history half in French and half in English. Page two is devoted to the parts list, while pages three to five are the exploded assembly guide with some detail paint guide and a lot of cockpit interior detail shown. Page six shows the scale plans for the front, side, top and bottom elevations.

Construction

I started with the cockpit floor, adding the seat, white metal control column and resin pedals. Next the resin sidewalls were cut off their resin backing sheet and sanded a little thinner and trimmed, then superglued to the inside of the fuselage halves. The instrument panel was glued to the right fuselage, the cockpit floor also attached along with the armour plating behind the pilot's seat. A lot of trial fitting will be required to get it all to fit correctly. I found that I had to trim off the sidewall detail where the instrument panel fits and the width of the cockpit floor before the fuselage halves would join properly.

The interior was painted Light Grey, the seat backrest and headrest Dark Brown, control column and instrument panel matt black and the rudder pedals silver. Sidewall detail was picked out in Dark Grey, and silver for the pipework. Once dry the fuselage halves were glued together, pegged and taped and left to set.

Unfortunately the two halves on my model did not quite match up. I lined up the nose, cockpit windscreen aperture, the underbelly radiator cowlings and the wing mounting joints, but the back end of the fuselage and the spine were out of alignment.

Once dry I gently sanded the spine and rear fuselage to the correct profile and trimmed the panel behind the cockpit. A little rubbing down was also needed on the nose joint. The one-piece wing was dry fitted before gluing it into place. Once set, the wing fuselage joint was sanded and the tail feathers added. These needed only a small amount of tidying up and are a butt fit to the fuselage. After the glue was set the model was given a coat of primer and once dry the high spots around the wing/fuselage joint were rubbed down. I did not need to use any filler on this model at all.

At this stage I cut out the wing landing light aperture and painted the under surfaces Humbrol matt Light Blue. The undercarriage legs and rams were fitted along with the tailwheel. I managed to break the white metal tailwheel while trimming off the flash, so be careful, it's thin! I managed to lose (until the model was finished of course) the white metal horn balance so I made one up from stretched sprue, drilled a small hole for the aerial and attached that.

The model was then given a coat of a matt Dark Earth and Dark Brown mixture and left to dry. The one-piece propeller and boss was trimmed up, the blades given a coat of matt black and the boss a coat of matt white with a small matt black ring at the rear. A short piece of stretched sprue was fitted to the propeller boss and painted matt black to simulate the 20mm nose cannon. Matt Dark Green camouflage was then painted on, copied from a photograph of 'White 54' of an unknown unit of the Russian Air Force.

Once this was dry the vacuum-formed canopy was carefully cut out and dry fitted before using PVA glue to fix it into place. The canopy is a nice fit (apart from the back end) so I decided not to push my luck and cut it to show it open despite having a spare. The landing light aperture was filled with a cut-to-shape and polished piece of transparent sprue.

At this stage I applied decals out of my spares box, consisting of large red stars on the tail, a white 54 on the fuselage and small stars under the wings. The 54 is a bit straight and should be more Cyrillic looking. The model was then given a coat of matt varnish and when dry the propeller (only a butt-joint), undercarriage fairings, exhaust and radio aerial wires added.

Accuracy

Pend Oreille gives no data for the aircraft but the wings and fuselage match up to their scale plans. The 'Encyclopaedia Of World Aircraft' gives the dimensions as: span 9.8m (32ft 1 3/4in) and length 8.9m (29ft 2 1/2in). Jane's 'All The Worlds Greatest Aircraft 1945' quotes the span as 9.8m and the length as 8.79m (28ft 10in).

My model scaled up as span 9.72m (31ft 11in) and length 8.78m (28ft 9 1/2in). I therefore make it 2 3/4in short in span and 1/2in short on length depending on whose measurements you take as accurate. Even so it looks pretty good to me, the wings are nice and thin and the overall shape looks correct apart from the rudder gap on my model.

Decals

There are none, so it's the spares box or after-market suppliers.

Colour Options

There are none, it's up to you to find out for yourself.

Conclusion and Recommendation

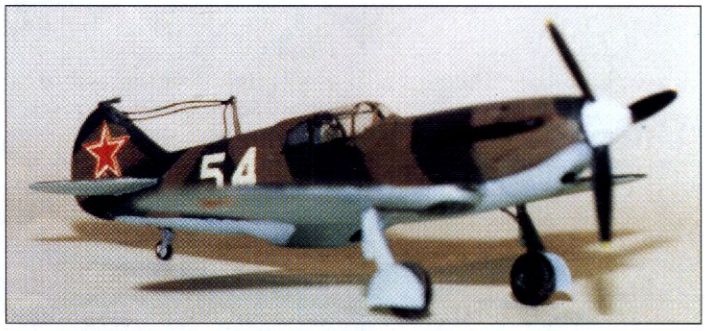
The cockpit interior is well detailed and with the detailed interior drawings in the instructions this kit could be super detailed quite easily, adding the gun sight, rudder pedal cables, throttle levers etc. It's a shame most of the detail disappears into the cockpit black hole once it's all assembled, although a lot is still visible even with the canopy shut.

It is a 'take your time and dry fit everything first' kit. It might present a challenge to a novice but it is fairly straightforward to assemble. It is a shame the exhaust manifolds were done in resin and not white metal as they are liable to break up easily. The fact that there are no decals and no suggested colour scheme may put a few people off. The U.S. price is $27. What the U.K. price will be I don't know.

I would recommend it to the experienced enthusiast who likes unusual subjects and likes to research his own colour schemes. Did I enjoy making it? Yes.

My thanks to Pend Oreille Model Kits for the review model.

Mike Kingsley



Focke-Wulf Triebflugel

Technical Data	
Manufacturer: Reheat Models	**Scale:** 1/48th
Status: New Tooling √	**Price:** £39.95
Panel Lines: Engraved √	
Type: Resin, White Metal & Vac-formed Clear	
Parts: Resin 28, Metal 15, Vac-form (Clear) 1	
Decal Options: N/A	
Manufacturer: Reheat Models	

The Kit

The kit is well presented in a strong cardboard box with all of the resin, cast metal and vac-form canopy packed in individual plastic bags. The kit is very crisply cast in light grey resin with some very good surface detail; the cast metal parts are also very well produced. A rather uninspiring ground crew figure is also included (but he's still waiting to be painted).

Instructions

A single sided A4 sheet contains a brief history of the aircraft, an exploded view instruction diagram and a suggested colour scheme.

Construction

The resin parts need little preparation so assembly can commence very quickly starting with the excellent cockpit assembly, one of the best I have ever seen - it's just a pity most of it is hidden from view in the completed model, even with the canopy open. Assembly is very easy; just make sure that the holes for the metal outriggers are deepened and the four fins are at ninety degrees to each other. The three rotor blades could benefit from a more positive location into both the fuselage and engine pods but this is a minor criticism. Very little filler was needed during construction.

Please make sure that the tail wheel is fitted first and then the whole assembly can be levelled up by adjusting the outriggers to ensure that the completed assembly is perpendicular to the ground. Finally cut out the very clear cockpit canopy which really needs to be displayed in the open position to reveal the excellent cockpit detail.

Accuracy.

I could not find any dimensions for this aircraft in any of my books but it captures the look of the Triebflugel very well.

Colour Options

A suggestion is made to use a late war scheme. I finished mine in a fictitious RLM 71/81/76 scheme.

Decals

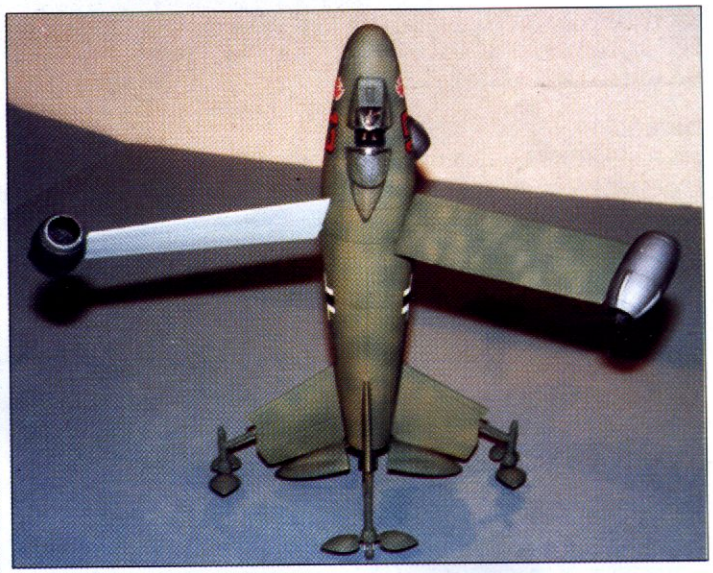
No decals are supplied.

Conclusion and Recommendation

A simple kit to build that looks great when finished, just take care to align everything and you will be well rewarded. At the price, nearly £40, I think that some decals should be included and perhaps the rather uninspiring ground crew figure could be replaced with a pilot figure but this grouse apart, I can recommend this quality kit to all.

My thanks to Reheat for the review sample.

Michael Cook.



De Havilland Sea Venom FAW. 21/53

Technical Data	
Manufacturer: Toko	**Scale:** 1/72nd
Origin: FROG (UK)	**Price:** £4.99
Type: Injection moulded Plastic	
Parts: Plastic 44, Clear 1	**Decal Options:** 4
Manufacturer: Toko, Experimental Industrial Technologies Plant JNT STK, 46, Mashinobudivna, 252180, Kiev, Ukraine	
UK Importer: Pocketbond Ltd	

The Kit

On receiving this kit I thought, Mmm, very nice, as the box art depicts an FAW.21 banking over an enemy position as two Wyverns move in to strafe it. Tasty, or so I thought. On opening, what we find is yet another re-boxing of the old Frog kit from the year dot with no apparent attempt at cleaning up the moulds. Disappointing considering the quality of their other releases. The kit comes on four sprues of light grey plastic, including the original Frog display stand, plus one lousy, unclear 3mm thick canopy, or rather chunk of translucent plastic.

Instructions

A single, A4 sheet, one side containing a brief history in Russian and English plus a parts map. Side two has the construction explained in three exploded views. Adequate, but not very clear.

Construction

As usual, this starts with the cockpit interior. This comprises a floor and two extremely basic ejection seats. This was painted black to hide the facet that it is so sparse. If required, there are plenty of generic after-market parts out there to make a decent interior. The fuselage halves were then joined and the nose added after a suitable weight was placed inside. The wings were added next, followed by the tailbooms and tailplane. Filler was required at all joins. The undercarriage was then added. The undercarriage doors look ludicrous as they are so thick that they would fill the wheel wells on their own when closed, so these were replaced using plastic card. The canopy was then discarded and replaced with one from the spares box. The kit was then painted and decalled before the underwing stores were added. The kit was finished with aerials from stretched sprue.

Accuracy

Using "The British Fighter Since 1912" by Francis K. Mason, published by Putnam, the length and span of the aircraft are given as 36' 7" and 42' 11" respectively. The kit scales out at 36' 9" for length and 43' 6" for the wingspan making it quite acceptable in this scale.

Colour Options

Completely disregarding the excellent decal sheet, mentioned later, only one colour option is given for an F.A.W.21 of No. 809 Naval Air Squadron of the Royal Navy aboard H.M.S. Albion during 1956, although the way in which the decals are numbered will allow you to haphazardly muddle through the other three options. All options are finished in Dark Sea Grey upper-surfaces and Sky undersides (not light grey as stated in the instructions). All paints used came from the excellent RAF/FAA range in acrylic by AeroMaster.

Decals

This is an excellent sheet giving no less than four options, three FAW.21's and one FAW.53. The FAW. 21's are from: 1) No.809 NAS, HMS Albion, 1956; 2)No.891 NAS, HMS Ark Royal, 1955; 3)No.890 NAS, HMS Ark Royal, 1956, and the FAW.53 is from No.724 Squadron, Royal Australian Navy, HMAS Melbourne, 1962. The register is excellent and the colour definition is very sharp. Colour density is also excellent with no base colours showing through. The decals were applied on a gloss base using Micro Sol/Set with no adverse effects.

Decal Rating = 10/10

Conclusion and Recommendations

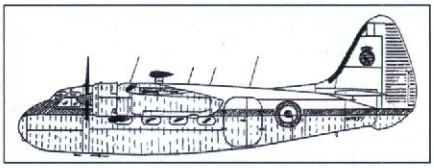
Compared to today's standard of kits, this falls way behind, but saying that, it is accurate and with a lot of effort a very fine model could result. It does make up into a neat little model and looks very much like the original. The decal sheet alone almost justifies the price of the kit. I really enjoyed making this model, and at the end of the day, that's what this hobby is all about; enjoyment. I have no hesitation in recommending this kit to all modellers, novice or experienced.

My thanks to Pocketbond Ltd. for the review sample

Gordon King

Photography by Alasdair King

Hunting Percival Sea Prince T Mk 1



Technical Data

Manufacturer: Magna Models **Scale:** 1/72nd **Price:** £24.25
Status: New Tooling **Type:** Resin, Metal & Vac-form Clear
Parts: Resin 31, Metal 16, Clear 2 **Decal Options:** N/A
Manufacturer: Magna Models

The Kit

When I received this review sample I was surprised at the small size of box it arrived in, but, of course there is no sprue since this is a resin model. On reflection most models could be contained in smaller boxes, though this wouldn't be a sound policy for major manufacturers vying for shelf space where size really does matter. Anyway I digress, the stout cardboard box contained a plastic bag with two fuselage halves split vertically, two one-piece mainplanes which included the rear engine and undercarriage housings, two tailplanes, a one-piece fin and rudder assembly, two engine front cowls, cockpit interior and cabin seats. A smaller separate bag had two moulded cockpit canopies in thick clear plastic and a small clear sheet for the cabin windows. Resin wheels and spinners and white metal parts for the props and undercarriage were in another bag.

All of the resin parts were almost totally free of flash and sink marks. Recessed panel lines, control surfaces and other details were very nicely reproduced on major parts.

Instructions

Three A4 sheets provide five pages of instructions giving a brief history together with specifications, dimensions and reference sources for the aircraft. A 1/72nd scale three-view drawing and five scale side views and full building instructions are also included on the sheets.

Construction

After sanding away the little flash that was evident and carefully sawing off the excess resin blocks attached to some of the parts, they were checked for fit and sanded where necessary.

The front engine nacelles were fixed to their rear parts on the mainplanes (take care they are handed) and the tailplanes were attached to the fuselage halves. Next the mainplanes were fitted to the fuselage halves and all joints filled with Humbrol filler and sanded when dry.

After painting the cockpit and cabin interiors I painted all of the seats and cockpit details and fixed these in place. The cabin windows were then cut out from the sheet and secured in their apertures with white glue. The two aircraft halves were next carefully stuck together and the cockpit window moulding was trimmed and fastened in place. All joints were filled and sanded flush when set.

Before spraying the aircraft with Holts autospray undercoat, I masked the cockpit and cabin window areas and when satisfied with the finish, the whole of the model was given three light coats of Holts Austin Rover Nautilus autospray. Finally the remaining parts were painted and fixed in place to complete the model.

Accuracy

The completed model scaled almost perfectly to the scale drawing on the instruction sheet.

Colour Options

The instruction sheet details a choice of four Royal Navy and one Australian version of the Sea Prince and clearly shows all serial and roundel locations. Full interior and exterior colours are detailed and as mentioned earlier I opted for the overall Royal Blue craft of No.781 Naval Air Squadron, which looks very smart indeed.

Decals

No decals are provided with the kit, but Magna Models recommend Modeldecal sheets for the roundels and serials. My decal bank was able to provide most of the necessary markings to complete the model although I did not have the very small Royal Navy and serials for the rear fuselage; these will be added at some later stage.

Conclusion

I would have liked to have seen a different method of producing the cabin windows; instead of having to cut them out, perhaps they could have been vacformed? Decals would also have been a bonus, but of course this would only have added to an already expensive kit. The deletion of the cabin interior seating would not, in my opinion, have detracted from the finished model since it cannot be seen and I have to confess that I did not fill the nose with lead, since I would have had to strip the local church roof to balance the model on its undercarriage. A discreet prop is employed instead. Having said all that, I thoroughly enjoyed making this model, it has a good solid feel to it and looks great. So if you need to add a Sea Prince to your RN collection or simply like the look of the aircraft, it is the only one ever likely to be available in 1/72nd scale, so get one now.

Highly recommended.

My thanks to Magna Models for the review sample.

Tony's Tip

Cabin windows that have to be inserted from the inside usually cause problems when it comes to painting. My solution is, before joining the fuselage halves, to paint the area around the windows in the appropriate colour first, fix the windows in place when the paint is dry and stick the fuselage together and fill and sand any joints. When you are satisfied with the finish, mask the painted areas around the windows using panel lines as suitable edges to the tape to disguise the final paint join. Paint the remainder of the model and when this is dry carefully remove the masking and clean off any residue from the tape. The result should be a nice tidy paint job with almost undetectable joints.

Tony Clayton

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Horten X (XIIIb)

Technical Data
Manufacturer: Sharkit **Scale:** 1/72nd
Price: £20.00 **Type:** Resin
Parts: Resin 15 & Clear sheet
Decal Options: N/A
Manufacturer: Sharkit, 10, rue Louis Blanc, 75010, Paris, France.
UK Source: Hannants

The Kit

This is a full resin kit coming in 15 parts, with a clear acetate sheet to make the canopy. The castings are fair, coming in a pale grey resin with little surface detail and very heavy excess resin casting blocks.

Instructions

These come on one double-sided A4 sheet, one side consisting of a short bi-lingual history with a couple of engine diagrams, and the other of various unclear exploded views describing construction. This is adequate, but not really enough for most modellers.

Construction

The construction is very straightforward, although the fit of the parts leaves a lot to be desired. Copious amounts of filler were required at all joins as well as some major carving and reshaping, especially on the nose as the fuselage halves do not match. The undercarriage is cast from resin and is extremely fragile, especially the nose gear. The legs could really have done with a metal core. The wheel-well doors are a bit on the heavy side (Okay, they look like slabs of concrete) so they were replaced using 20 thou plastic card. The acetate sheet has an outline marked on to enable the modeller to cut out an accurate canopy shape. DO NOT follow this as it will give you anything but the correct shape. My suggestion is that you hold a piece of paper over the open cockpit and rub a pencil on it to give an accurate outline, then transfer this onto the clear sheet.

Accuracy

According to "German Jet Genesis" by D. Masters, the Horten XIIIb would have had a span of 12m and a length of 12m. The kit scales out at 12.5m and 11.2m respectively. This means that the general outline of the aircraft is slightly inaccurate, but as it is a 'projekt', who knows what the final production aircraft would have looked like? The model certainly still looks right compared to sketches.

Colour Options

No colour options are given so any combination of late war colours should be feasible. I chose to finish mine in overall natural metal with a mottle of 81/82 on the upper surfaces. Markings were then applied to represent an aircraft of JG.7.

Decals

No decals are provided in the kit so rob the spares box and let your imagination run riot.

Conclusion & Recommendation

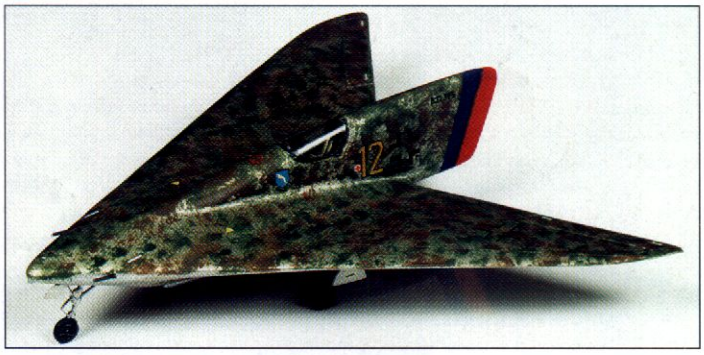
A fair kit of an obscure, drawing board project that could have been the world's first supersonic fighter. Quite a bit of work is involved but the end result is very pleasing and a real eye catcher.

Definitely not for the beginner but a definite 'must' for any collector or modeller of Luftwaffe 1946 aircraft. Recommended for the adventurous modeller.

My thanks to Sharkit for the review sample.

Gordon King

Photography by Alasdair King



Focke Wulf P.V. 'Volksjäger'

Technical Data
Manufacturer: Unicraft **Scale:** 1/72nd
Status: New Tooling **Panel Lines:** Engraved √
Fabric Effect: Raised √ **Price:** £TBA
Type: Resin and Vac-formed Clear
Parts: Resin 6, Clear 1 **Decal Options:** None
Manufacturer: Unicraft, P.O. Box 117, Nikolaev-58, 327058, Ukraine.
UK Source: Hannants.

The Kit

I have been building kits from this relatively unknown company for several years now and was pleasantly surprised to see that the quality of all aspects of this manufacturer have improved by leaps and bounds. This kit is presented in a red card box with a well printed colour side view on the top. On inspection of the separately bagged contents the small size of this aircraft is immediately apparent. Unicraft seem to specialize in diminutive machines and this is no exception.

The six pieces comprise only the basic airframe; no interior or landing gear details are supplied. Adding these would be no problem for those of us with a healthy spares box but may be disheartening for someone new to the 'short run' field. The maker recommends that the builder purchases a Heller Me 163 to supply the details but I imagine that the combined cost would make this a rather expensive little kit. The cast resin components are beautifully engraved and show few air bubbles but the flying surfaces are moulded on a heavy feed and require careful sawing to remove as the resin is very brittle, lacking that almost waxy feel of many other manufacturers. The canopy is supplied on a resin blank for protection and I have found this feature useful in the past, as it allows the builder to crash form a replacement if you muck up the original, (although a spare would be better). No decals are supplied but this should not prove a problem to the intended buyer.

Instructions

Four separate sheets are supplied, a short history with a kit contents list, an exploded view (some what superfluous due to the simple nature of the kit, but well drawn), a selection of scale drawings from several sources showing alternative interpretations of the side view and an absolute jewel of a painting guide in full colour. The colours specified are RLM originals; no suggestion is made as to which manufacturers' paints should be used. These sheets are so nice that they will be filed away as a permanent reference in my library.

Construction

As I am currently building an enormous vacform it was a real pleasure to deal with something so tiny and simple to build. After removing the parts from their thick feeds and cleaning them up the basic assembly took all of 30 minutes. I filled the cockpit area with some generic details from the spares box and brushed over some interior grey. The canopy was cut from its excess material using the resin plug with indicator lines as a guide and for the first time ever it fitted without any further trimming. Top marks Unicraft! The landing skid is moulded in the retracted position and integral with the fuselage halves. I thought the outline a bit vague so I sanded it down and replaced it with a curved 15 thou plasticard piece. This stage could have been missed but I believe it adds to the finished appearance of the model.. No seam filling was required beyond the use of gap filling superglue to fit the main components, but a few pin holes were apparent after priming. The priming did however show the level of surface detail which was as good as the best injection kits with fine, even scribed panel lines, raised fabric effect on the control surfaces and exquisite little hinges on the canopy frame and access panels. In fact my only gripe was that two of the aforementioned pin holes were on the under wing-tip skids and the edge of the rocket nozzle, both edges being very hard to fill and sand whilst keeping the correct profile.

Accuracy

As this design comes from the dustier recesses of the 'Luftwaffe 46' filing cabinet it is difficult to find references. However after some considerable searching I found dimensions in 'Luftwaffe 1946' by Janusz Ledwoch and Published (in Polish) by Wydawnictwo Militaria. If my translation is correct the span should be 4.8m and the length 6.0m The model scales at 6.0m span and 6.1m long so although the length is as near as perfect in this scale the span is curiously oversize, however the published 3 view drawings do not agree with the published dimensions and the model is a good duplicate of the plans. It certainly looks the part although you have to wonder what the endurance would have been with such little room for fuel. I can only speculate that it would have been used as a parasite or towed fighter and to that end I decided to display it on a handling cradle borrowed from a Bachem Natter rather than a launching trolley (which I would have had to scratch build).

Colour Options

The painting guide only gives one rather pedestrian choice of RLM 75/82 splinter over 76 undersides with a light mottle on the tailfin and a yellow Reich Defense band. As this is a 'What if' however, you can make your own choice. I decided to follow the manufacturer's recommendations to the full however and found the result to be most pleasing.

Decals

None are supplied in this kit, so mine came from the spares box.

Conclusions and Recommendations

In the past I would have had difficulty recommending Unicraft kits to any but the seriously obsessed. However with the great improvements in the standard of presentation and contents I can wholeheartedly recommend this delightful product to all mixed-media builders. (Forgive my enthusiasm but the combination of subject matter and quality has fired me up into a building frenzy). It is perhaps a little fiddly for the first timer in resin and admittedly does need a well stocked spares and decal box, but the manufacturer is honest about the kit's limitations and as long as the price is not excessive I can happily say that if the subject is to your liking go out and buy one now (as only a hundred or so will be cast).

My thanks to Unicraft for the sample.

Linzi Mumford

Vought-Chance F4U-5/5N Corsair

Technical Data

Manufacturer: Minicraft **Scale:** 1/48th
Price: £9.99 **Panel Lines:** Recessed √
Status: New Tooling √
Type: Injection Moulded Plastic
Parts: Plastic , Clear **Decal Options:** 2
UK Importer: Pocketbond Ltd.
Tel: 01707 391509 Fax: 01707 327466

The Kit

The first 1/48th scale mass-market offering of this postwar variant, the kit comes in a compact box with evocative box art by the aviation artist Roy Grinnell. Inside, the sprues are moulded in a brittle, pale gray-green plastic. Those who have built a few Corsairs in this scale may notice a resemblance to the Hasegawa/Academy F4U-4, reworked with reasonably accurate, if somewhat inconsistent, engraved panel lines. A cowling, canopy fairing and radome, which seem similar to the War Eagle "dash five" conversion parts, are incorporated.

By today's standards, the main components are second-rate. The fuselage halves and cowling parts are thickly moulded, while the wing halves are fragile, with indistinct mating surfaces, plenty of ugly ejection plugs and shallow forward landing-gear bays. The clear parts were packed in a separate bag; unfortunately, they were still scratched, with moulding flaws. They're also the thickest clear parts I've seen since Elvis was king, Revell was in Venice, California and "Made in Japan" meant... well, judging by this product, what "Made in China" means today. The engine, wheels and gunsight look very similar to those found in Academy P-47 T-bolt series. These would be fine if they were appropriate for the Corsair, but they aren't. I won't elaborate on the kit's exotic aromatic properties, save that it may inspire nostalgia among those who spent their misguided youth beating the bricks in mysterious Asian locales, seeking cheap model airplane bargains...

Instructions

These are in A4 booklet format, with a brief, if somewhat narrow history in readable English (overlooking the F4U-5's significant photo recce, night close air support and bomber escort contributions in Korea), parts diagram, illustrated nine-step assembly sequence and a four-view layout for final painting and decalling.

Construction

I began with some test fitting and cleaning up, which showed asymmetrically-sized and mis-proportioned wing halves, with an otherwise overall workable fit. I then consigned the propeller, wheels, intakes, seat pan, engine crankcase, antennae and ordnance to the spares box (you never can tell when you'll need interesting shapes like these, you know). There's a wide gap where the rudder meets the dorsal fin, so I cut the rudder away for repositioning.

Moving to the cockpit, I detailed the bare cockpit area with adapted Eduard and Reheat items, Milliput, plastic stock, sprue and fuse wire, scratchbuilding a radar scope for the instrument panel centre. As supplied, the kit's headrest is too small and sits too low, and the canopy fairing is too big. The instrument panel is represented by a semicircular plastic slab with rudder pedals attached. While this is the wrong shape, the instrument and console decal layouts are generally accurate, and the basic cockpit tub shape is correct for this variant. After painting, the tub was fixed to the fuselage, the aft bulkhead requiring scraping, filing and filler to correct the poor fit.

After joining the fuselage halves, the filling and sanding began with the fuselage seams and dorsal fin root. The oil cooler intakes were scratchbuilt with styrene strip, sheet plastic and photo-etched grills. I thinned the wing trailing edges and deepened the aileron, elevator and flap channels for a better scale appearance. The wing roots were packed with strip styrene for a better fit, but plenty of Milliput Superfine White was still needed to blend in the lower wing to the fuselage. After joining the cowl ring to the two-piece cowl (a duff "snap-fit" style tab and slot arrangement), I adapted an engine crankcase from a Hobbycraft Bearcat to replace the inaccurate kit item. I then used a short length of wooden dowel to bring the engine forward about 7/16" for better scale appearance and to conceal the cowling internal joins. I then filled and rescribed the cooling flaps to more accurately represent the "dash five's" arrangement. The cowling was then butt-joined to the fuselage; more filling and sanding. I sanded back the exhaust shields for better scale appearance, then removed the superfluous locating pins (no locating holes here) before installing. I added the landing gear, doors, cannon ports, ordnance hardpoints and radar pod. A shot of Halford's White Primer highlighted some flaws which were corrected with more filling and sanding. The model was reprimed, missing panel detail rescribed, and antennae added from a True Details photo-etched set. Finally, I added the windscreen, the worst-fitting clear part I've seen since I borrowed Dad's auto body putty to fair in the glazing on my Aurora 1/32nd scale Mitchell. Come to think of it, that old B-25 wasn't so bad...

Accuracy

The finished model scales within acceptable limits, slightly under six scale inches short in length and just over four scale inches long in span when compared to the specifications quoted in the kit's instructions. The wing root to cowl proportion is a bit short, the wing sits too far forward and the cowling is slightly too long. Since the key visual characteristics of this Corsair variant include the lengthened nose and curved lower cowl, the model really doesn't look right out of the box. Other "dash five" kits and conversion sets have also suffered with the same flaws. Nevertheless, I'd hoped Minicraft would not repeat these errors.

This kit also suffers from some detail shortcomings including: the prop blades are too narrow, the wheels too big and the engine is the earlier R-2800 version which isn't right for this Corsair variant. The external stores are substandard and are likewise best replaced.

Colour Options

One option is provided: "Annie-Mo", the well-known Fleet Composite Squadron Three machine flown by Lt. Guy "Lucky Pierre" Bordelon, the US Navy's only Korean War ace. In Glossy Sea Blue with matt black anti-glare panel, this colourful Corsair features squadron insignia, personal nose art, mission markings and red kill stars. Too bad more representative Navy or a grimy black Marine Corps "Flying Nightmare" option weren't included, but you can get Superscale markings for these and other options if you want something different. The model was painted with Testor's Model Master Glossy Sea Blue for the overall finish, Halford's Matt Black for the prop and anti-glare panel, and various colours from the "paint locker" for detail painting.

Decals

"Made in Mexico", the decals were well printed with a glossy finish, but the national insignia were just slightly out of register. Decals for day and night fighter instrument panels and cockpit consoles were included. No stencilling or prop logos were provided. The markings were correctly "toned down" with a blue tint but the mission markings, squadron and personal insignias were somewhat simplified. These points are academic, as my decals shattered on contact with the water and were therefore unusable without Micro Film or clear lacquer overcoating. I used ScaleMaster decals from the War Eagle F4U-5N conversion set to finish the model. After subtle weathering with silver wax pencil, chalk pastels and oil paint washes, AeroMaster semi-gloss clear sealed it all together, toning down the glossy finish for a realistic scale effect.

Decal Rating = 4/10

Conclusion & Recommendation

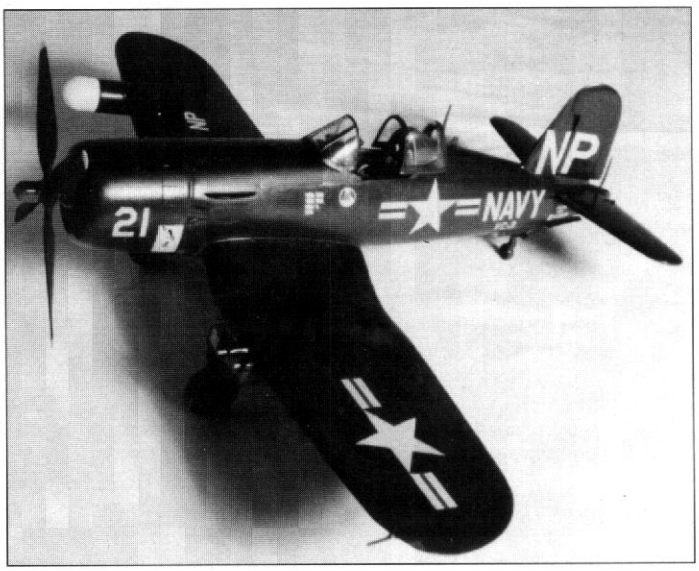
I was excited when I heard that Minicraft were offering a mass-produced 1/48th kit of this post-war Corsair variant. It's one of my favourites, and my expectations were high. I suppose it was too much to hope for that Minicraft could provide a state of the art "dash five" at a bargain price. Instead, I was once again reminded that you get what you pay for. Having converted Hasegawa and Heller Corsairs using War Eagle and Hi-Tech conversion sets, I must say that these projects yielded better overall results from the same amount of effort devoted to reworking this kit.

This product is not however without its advantages. For the thrifty modeller with a well-stocked spares box, the price is right. Those who enjoy re-engineering inaccuracies and plenty of filling and sanding may find satisfaction here. For those who don't, the cottage industry will find a market for updates. Building this kit also broadened my modelling perspectives. After this disappointment, the shortfalls of the latest Tamiya or Revell-Monogram releases seem petty.

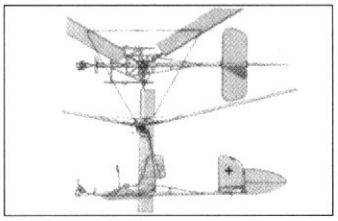
In fairness, other reviewers have been less critical of this kit. While the basics are there for experienced modellers to produce a satisfactory replica, I was unimpressed by the kit's lacklustre quality, proportional inaccuracies and inconsistent fidelity to detail. I'm also afraid the low price will attract beginners who will be discouraged by the kit's crude engineering and fit. For these reasons, I can't recommend this kit to anyone who expected, as I did, a quality tooling of the F4U-5/5N. A nice-try knockoff at best, this hybrid falls short of the standards that modellers expect today, offering little improvement over the older kits and conversion sets upon which it appears to be based.

Our review sample was supplied by Toyway.

Scott G. Welch



Focke-Achgelis Fa 330



Technical Data

Manufacturer: Pavla Models **Scale:** 1/72nd
Price: £8.50 **Type:** Limited Run Injection Moulded Plastic & Etched Brass
Parts: Plastic 9, Etched 19 **Decal Options:** 1
Manufacturer: Pavla Models, Kubelikova 9, 709 00 Ostrava, Czech Republic. Tel/Fax: + 420 69 5116
UK Importer: H.G.Hannants Ltd

The Kit

Don't be fooled by the size of the box! The Fa 330 was a WWII one-man gyro-glider, or rotor-kite, towed along by a surfaced German Type IX-D/D2 U-Boat as "over the horizon" target spotters. The tiny model is made up of light grey plastic parts for the rotors and main structure, with the finer framework and controls provided by the etched brass. The plastic has very little surface detail on it while, in complete contrast, the etched brass has a lot of delicate relief detail, especially on top of the rotorhead, the seat belts and around the instrument panel.

Because of the small size and the delicate nature of the parts, they are all sealed inside their own sections of a plastic bag which is then stapled to the instruction sheet.

Instructions

The instructions consist of a single exploded-view drawing on one side of an A4 card with two additional small drawings to show the rotor head detail more closely. The drawing clearly distinguishes between the metal and plastic parts and there is a key to painting those few parts that differ from the main colour.

Construction

With only 28 parts, construction is simple and relatively quick. The plastic is fairly brittle and the parts are firmly attached to the sprue, so a fine razor-saw is the best way to remove them. There is a find mould line all the way around each part too, but this can be easily removed with one quick scrape of a scalpel blade. Other than that, the parts are well-formed and fit together well. Where the rotor head and arms join blades, the blades have small grooves cut to help with precise positioning. Fitting the fine etched triangular bracing wire is a good idea at this stage, as a double-check that the blades are angled correctly.

The etched parts that need to be 'bent' into three dimensional shapes are all suitably 'weakened' in the right places to make the process simple. The metal framework at the base of the horizontal spar looked as if it might be awkward but, in fact, turned out to be easy to shape! The trickiest part of the whole assembly is the etched detail at the rotor head. At the top of the rotor mast a small box section resisted initial attempts to bend the sides up into position, and the fine detail on top of the head has 'arms' which have to be bent upwards from the centre and then back down again to meet with the roots of the blades. It's a bit fiddly, but the result is very effective.

Accuracy

The full-size dimensions of the Fa 330 I found consisted of only the rotor diameter of 24 ft and the fuselage length, such as it is, of 14 ft 6 inches. On the model the rotor span was spot on at 4 inches, but the length was just over by 0.15 inches. However, the overall look of the kit is a superb little copy of the real thing.

Colour Options

The instructions only give one colour scheme, which is all-over 'Hellgrau' RLM 02 (dark grey), except for the seat and seat belts. However, in the limited information I found, in operational service it was painted in a much lighter colour, probably 'Lichtblau' (RLM 76), a pale blue-grey, as displayed on the full size examples at the RAFM Cosford and the Hubschrauber Museum, Buckeburg, Germany.

Decals

The decal sheet measures only about an inch square and consists of six small black and white crosses to go on the tail surfaces. The carrier film is thin with a semi-gloss finish which adheres very well to the gloss-painted surface without using any decal solutions. The depth of colour and printing registration are also good.

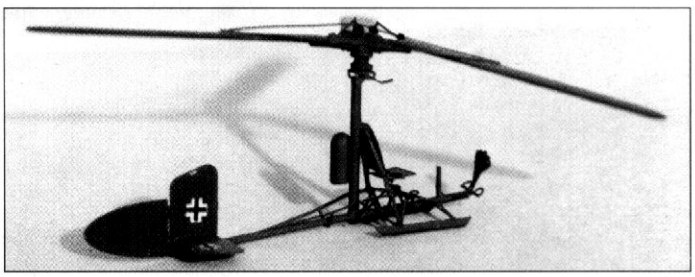
Decal Rating = 9/10

Conclusion and Recommendation

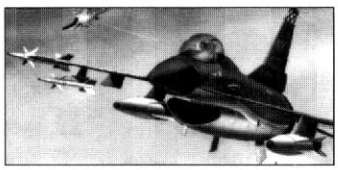
At first sight you don't appear to be getting much for your money, but the tiny model that results is excellent. The relative ease of construction makes it an ideal kit for someone trying out multi-media kits for the first time and it's well within the capabilities of most modellers. I highly recommend this kit.

My thanks to Pavla Models for the review sample.

Fred Cooke



General-Dynamics F-16A/B Falcon Plus



Technical Data

Manufacturer: InTech **Scale:** 1/72nd
Status: Revised Tooling √
Panel Lines: Engraved √ **Fabric Effect:** √
Quality: •3 **Price:** £TBA
Type: Injection Moulded Plastic
Parts: Plastic 51, Clear 4
Decal Options: 3 (Israeli, Dutch & USAF)
Manufacturer: InTech 2, ul. K.Zemaitisa 12, 30-252 Kraków, Poland. Tel/Fax: +48(12) 267-45-48
UK Source: Pol Models

The Kit

The kit comes in a flimsy cardboard box containing two large dark grey plastic sprues and one medium sized peach coloured sprue holding all the underwing stores and hard points in a plastic bag. Another plastic bag contains the cockpit transparencies which are thin and clear with no imperfections. The decals were loose in the box with the instruction sheet. Very little flash was evident but a small amount of surface marks and cracking shows on the wings and tail. Panel lines are lightly recessed and there is quite a lot of detail on the undercarriage and wheels. No pilot figures are included.

The Instructions

The instruction sheet covers four sides of A4 paper, mainly in English with a 15 stage exploded view assembly clearly showing the single seat or two seat options. All parts are clearly shown and numbered as are the sprues, with dotted lines to show where some of the smaller pieces fit together. Two and a half sides are devoted to assembly and part painting with the rest being devoted to camouflage and decal positioning.

Construction

You start by deciding which version you are going to build, the single seat or two seat version (I chose the single seat version) and start with the cockpit tub which consists of the floor and sides and one or two seats depending on which version and that's it, no more detail! This is then put into the lower fuselage before gluing the top of the fuselage to the bottom. The cockpit fairing and canopy then go on, the cockpit fairing needed a little sanding to make a good fit (I left the canopy off till later), followed by the nose and engine exhaust (after adding a lot of nose weight). The engine turbine is well represented but there is no detail on the reheat pipe, it's just a cone shape. A bit of trimming of the rear fuselage is needed to make a good fit for the tailpipe. Next the engine air intake is assembled and fitted. A bit of filing and a little filler are needed to hide the poor joint (a bit more weight was added here as well).

The wings and tail are added next, The tail fin can be fitted up to half an inch too far forward or backwards as the lug is too short for the hole provided. It does not fit too well either and needs a little filler. The elevators (parts 27 and 28) need anhedral as shown in the head-on view in the instructions, but part 28 (the left side) needs a lot of scraping to get the desired result (I'm still not happy about this bit though). The wings need a lot of trimming to get them to fit and a lot of filling and rubbing down to cover up the poor joint especially on the top surfaces. From underneath the fit looks quite good.

The lower stabilisers don't fit very well and need a little trimming and a touch of filler. The undercarriage was simple and easy to assemble and fit and looks very effective. I made a mistake on mine and did not give the nosewheel a slight forward slant. The instructions are a bit vague about fitting the underwing pylons, only two dots to give you a guide. Once you realise that the pylons fit between the flap hinge and front slat hinge lines, then there are no problems.

The canopy needs a little PVA glue to hide the gaps but the fit is not bad. Unfortunately there was a pronounced sprue gate mark on either side of the canopy which did not want to polish out.

Accuracy

No two F-16s appear to have the same hardpoints, some have one per wing plus the wing tip rails, some two per wing, some three and some a combination of these plus a centre line hard point. The only certain thing is that the wing tip rails usually carry Sidewinder missiles when they are fitted. You need to find a picture of your subject to be sure. The two pitot tubes either side of the nose and the undernose bump are not mentioned or supplied, but to be fair these parts are tiny. The navigation lights either side of the air intake are also omitted

The overall shape looks right, the model scales up to 9.57m span and 14.52m length, which according to Jane's World Aircraft makes it spot on in length, while the scale span is 1.6mm too big. Near enough for most modellers I would think.

Colour Options

There are three colour options shown on the instructions, all being variations on dark and light greys. Two options are for the single seat version and one for the two seat version. The first is for F-16A of the 138 TFS/174 TFW, New York ANG Desert Storm, Al Kharj, 1991. The second is an F-16A in Israeli markings in 1995, while the third is an F-16B in Danish Air Force markings. Paint colours are called out by Humbrol numbers, as well as the appropriate FS numbers.

I chose to make the single seat Israeli version as it is a bit brighter than the other two options, being predominantly Light Compass Grey with Medium Grey on the upper surfaces and Grey on the nose and a splash of red decal across the tail fin. The canopy should really be a semi-transparent pale gold finish, but I left mine clear.

The completed model was given a coat of Johnson's Klear prior to applying the decals.

Decals

The decal sheet has the three options neatly printed out in a matt finish with a little carrier film around each piece all clearly numbered. The decals came away from their backing paper easily after a few second in luke warm water but are very thin, and will crack and split very easily if you are not careful.

The decals reacted well to Microsol and Microset. Unfortunately the stencilling, ejection seat warning etc. are in 'high-vis', whereas all the options given should have 'low-vis' markings. After giving the decals a protective coat of Klear, the carrier film was still visible with some silvering on the code numbers. After allowing to dry overnight a coat of Matt Varnish was then applied: most of the carrier film visible had disappeared when the varnish had dried but a little silvering was still evident.

Decal Rating = 6/10

Conclusion and Recommendation

My initial reaction on opening the box was quite good but despite the fact that the model goes together fairly quickly the poor fit lets things down quite badly. Perhaps the mould failed to close properly on my model so when the plastic was injected some pieces were moulded too thickly as the parts that did not fit well were all on the same sprue.

Once filled, rubbed down and painted the model looks quite impressive.

I would recommend this model to all as it is nice and easy to assemble and with care and time can be made to look really good. The cockpit is ripe for a bit of super detailing as it is so bare; only a seat, floor and sides, not even the side stick or instrument panel are provided.

My thanks to POL Models for the review sample.

Mike Kingsley

MiG-21MF Fishbed J

Technical Data
Manufacturer: Academy **Scale:** 1/48th
Price: £13.99 **Panel Lines:** Recessed √
Status: New Tooling√ **Decal Options:** 3
Type: Injection Moulded Plastic
Parts: Plastic 135, Clear 4 **Decal Options:** 3
Manufacturer: Academy Plastic Model Co., Ltd. 273-64 Suyu-dong, Kangbuk-gu, Seoul, Korea. Tel: 82-2-908-7000 Fax: 82-2-997-3003
UK Importer: Toyway, Letchworth, Herts. Tel: 01462 672509 Fax: 01462 672132

The Kit

Having released the MiG-21PF (Fishbed D) last year, Academy has now followed up with the later MF mark, or Fishbed J, and a particularly excellent kit this is too. The model comes in 135 light grey plastic parts, on five individually wrapped sprues lettered A to E. A few of the parts on sprue A, presumably intended for the original PF Fishbed D, are not to be used, while sprue D contains the nose assembly, ejector seat, dorsal spine and tailfin assemblies specifically for the MF variant. The transparency sprue comes without an individual wrapper, but the canopy parts are clear and allow for open or closed positions. All the main components are flash-free and have been crisply moulded to a very high standard with finely engraved lines and surface panel details.

Instructions

The instructions come in a very clear, four-page fold-out format, breaking overall assembly down into 11 stages. Small photographs accompany certain stages to illustrate how more complicated sub-assemblies should look when completed (I found these very useful). Also included are a 'parts locating diagram' (sprue map), an armament diagram and a short history of the aircraft in English and Korean. Then there are three separate pages for painting and markings for Soviet, Indian or Hungarian Air Force Fishbeds.

Construction

As usual, construction starts with the cockpit and ejection seat, the interior sporting basic rather than excessive detailing. Painting instructions for the cockpit interior details, controls, instrument panel and seat are given too. The nose section and radome must then be put together and weighted with a recommended 15g of ballast. The completed nose section fits onto the main two-part fuselage assembly, which in turn receives the dorsal spine and two-part tailfin distinctive of the Fishbed J. Overall, I found the fit of the entire fuselage and tail assembly to be excellent with just a hint of a ridge where the nose section joins behind the cockpit. Do remember though before the fuselage is completed to open up a couple of underside holes to be used later for the belly tank hardpoint and cannon.

The rest of the assembly is very straightforward, the wings fit tightly into place at the correct slightly downward angle, and I used just a little filler at the forward wing root-fuselage join. More holes also need to be drilled out on the wing undersides for hardpoints. But the most ingenious, if not fiddly, part of the assembly is the main undercarriage. This involves carefully bending back the lowest portion of the mainwheel leg door and inserting a very delicate linking assembly between the door and the mainwheel leg. The parts do fit well, and the door should end up standing at a slightly adjacent angle to the mainwheel. Again, an accompanying photo on the instructions serves as a handy illustration.

There are possibilities to model certain features, inboard flaps, forward and ventral airbrakes, in the open or extended positions. The choice of stores includes two K-13A and two K-13 (AA-2 Atoll) missiles, a brace of UB-32 and UB-16 rocket pods, plus two 130 gallon drop tanks.

Accuracy

Bill Gunston's (Osprey) 'Encyclopedia of Russian Aircraft' gives the plane's length as 12.285m from inlet tip to nozzle. On the model this distance is 255mm, which scales up almost exactly. The same with the wingspan: Gunston gives the span at 7.154m, I measured the model's span to be 147mm, again, a very accurate scale measurement. Just as importantly, the model's overall outward appearance seems to render the MF variant wholly accurately.

Colour Options

The Soviet Air Force Fishbed option 'Black 28', illustrated on the kit's box-top, has a two-colour camouflage pattern of dark brown over light sand, with light blue-grey indicated for the undersides. The Indian AF Fishbed is an overall light grey, but with a 'Warriors' Squadron nose badge to liven it up. The Hungarian version (which I opted for), takes a dark green over a light brown camouflage scheme, with light grey undersides. (There was a slight inconsistency here; the instructions indicate light green undersides for the Hungarian scheme, but this doesn't match my own photo sources).

A problem I encountered at this stage was the colour references, which are only given in FS numbers on the instructions. I had trouble matching most of these FS numbers with any model paints, all except the Hungarian scheme which I managed to match to H149 Matt Dark Green and H118 Matt US Tan. Hungary jettisoned its Communist Air Force insignia of a red star enclosing a green-white roundel in March 1991, eventually opting for the red-white-green 'arrow' chevron of its pre-1942 era aircraft. Also revived in 1991 was the tradition of colourful squadron badges, but sadly there's no example of these provided on the decal sheet.

Decals

The decals are fairly thick with good colour density and are quite glossy with an excess of carrier film that needs trimming away. The print register on the Soviet and Indian markings is spot on, but just my luck, the Hungarian chevrons have too thick a white band around them which need carefully trimming with a blade.

There are also stencils a-plenty to apply for all three versions.

Decal Rating = 8/10.

Conclusion and Recommendation

Retailing at around the £13.99 mark, in my book this kit represents excellent value for money. It went together quickly without any major problems and the final result really captures the MiG-21's sleek, aggressive looks. For me it was an unfamiliar foray into 1/48th, but the high quality of this kit has certainly whetted my appetite for building more fast jets in a larger scale. Highly recommended.

My thanks to Toyway for the review sample.

Tom Mulligan

Mitsubishi XF-2A (FS-X) Support Fighter

Technical Data

Manufacturer: Hasegawa
Scale: 1/72nd **Status:** New Tooling √
Panel Lines: Engraved √ **Price:** £9.99
Type: Injection Moulded Plastic
Parts: Plastic 123, Clear 6
Decal Options: 2 (1st & 2nd Prototype)
UK Importer: Amerang Ltd, Commerce Way, Lancing, West Sussex. BN15 8TE Tel: 01903 765496 Fax: 01903 765178

The Kit

The aircraft is based on the F-16C Fighting Falcon but developed to act as a ground attack/anti-shipping strike aircraft to replace the ageing F-1 support fighter. Changes include a one metre fuselage and wingspan increase, a three piece canopy to protect against bird strikes at low altitude, updated radar and composite construction to reduce weight.

The kit comes in a fair size box with colourful artwork on the lid. Inside are two bags, the first one containing the large decal sheet, a small soft plastic sprue and a clear one for the three piece canopy. The second bag holds eleven different sprues in white, flash free, crisply moulded plastic, with no shrink or ejector pin marks. There are a few parts on the sprues that are not needed (these are for the two seat version out later this year I understand) but I counted 123 parts (including underwing stores) to assemble plus six transparent ones as well.

There are some raised details on the mouldings and all panel lines are engraved. The detail includes all the panel lines, control surfaces, inspection panels, a nicely moulded undercarriage and detailed wheel wells. And yes, the jet pipe is detailed as well. No pilot figures are included on the sprues. Cockpit instrumentation is included as seven decals. On the review model the aerials moulded on to top and bottom fuselage were curled over and needed gently straightening out. Underwing stores supplied are one 300gal and two 600gal drop tanks, four ASM-2 missiles and two AAM-3 missiles.

The Instructions

Instructions are on eight sides of A5 printed paper, half in Japanese and half in English. One side is devoted to a short history and technical data, another one to safety and decal application. Three sides show the stage by stage assembly in twelve stages of exploded drawings, including small detail painting colours.

Two further sides show decal positions and external painting guides, while the remaining side shows all the sprues and marks the parts not needed together with a paint colour reference.

Construction

Construction starts with the cockpit interior comprising a cockpit tub, control column, seat and front instrument panel. The cockpit tub, seat rails and cockpit interior were painted grey, the seat and control stick matt black as was part of the instrument panel. Once dry and assembled the seven decals for the instruments were added prior to the front halves of the fuselage being joined (after adding 5g of nose weight). The fuselage consists of the lower section split horizontally and two top halves, the cockpit section and the rear engine section. Prior to joining the rear section, the undercarriage bulkheads, engine turbine and the two soft plastic tubes for locating the elevators are fitted. The fuselage joints are near perfect and only a little rubbing down was needed.

The engine intake is assembled next and fitted to the fuselage along with the lower stabilisers. The tail fin is next and is fitted along with the wings. At this stage the elevators should be fitted but I left mine off until later. The fit of all the parts is excellent, I used no filler and I did very little sanding down of the joints.

The undercarriage was one of the most straightforward pieces of assembly I have ever tackled on a modern jet model. The instructions are simple and clear and the parts all fit easily together. Nice one Hasegawa.

At this point I painted the model Humbrol white, the nose matt black and gave the model a coat of Johnson's Klear and applied the decals. More on that subject later, except I should have applied decal 87 before putting on the tail fin.

The three piece canopy was fitted next after adding the HUD. You have a choice here of either open or closed. I chose the open position to allow some of the cockpit detail to be seen. After this all the small pieces were added except the nose probe to avoid breaking it too soon. Then the under wing pylons and stores were added and the elevators were push fitted into their soft plastic mountings so that they are movable. To finish off the model the nose probe was then added. The completed model was then given another coat of Klear to seal the decals.

The fuel tanks were painted white, the AAM-3 missiles aircraft gray and the ASM missiles are a chequer-board of red, green and yellow. The ASM missiles were not fitted when the photograph was taken as I was still painting them when the deadline was getting near, but they were added later.

Accuracy

Hasegawa lists the wingspan as 11.13m (including wingtip launchers), length 15.52m and height 4.96m. As this aircraft is based on the F-16 with a 1m increase in length and also a 1m increase in span these figures appear to be correct (The Worlds Greatest Aircraft and Jane's World Aircraft Recognition Handbook). Scaled up the model measures 11.16m wingspan and 16.27m length including nose probe for the 1st prototype and a length of 15.52m for the second prototype (including nose probe). Hasegawa is probably more accurate then I am at their measurements and they are accurate as far as I am concerned.

According to all the information I could find they state that no internal weapons are carried so I filed off the fuselage gun fairing only then to find the fairings show up on photographs OOPS!

Colour options

There are two colour options, white overall with orange yellow flashes and a blue spine or white overall with red flashes and a red spine.

Colours are listed by Mr. Color and Gunze Aqueous Hobby Colour ranges.

Decals

This kit includes a large decal sheet with about 100 decals on it. They are gloss printed, crisp and clean with only a little carrier film and they offer two options, the first and second prototypes. The first prototype '501' has all the red stripes on the decal sheet. If you decide to make '502' then all the flashes and stripes will have to be painted on as they are not included as only the serial numbers and tail markings are.

Some of the decals have transparent holes in them to fit over the tail fin and arrestor hook, except that these holes are carrier film and either need trimming after applying or cutting while on the backing sheet ,which would be the better option. I found the fuel tank decal stripes were a little too long but left them as they were as I like to show my models as they would be built straight from the kit.

The decals only needed a few seconds in room temperature water to slide off the backing sheet but they do have a tendency to curl over if you are not careful. If the water is too warm I guarantee they will curl. They reacted well to Microsol and stuck down well to the model. They also stick well to your fingers if you are not careful! Lots of time and patience are needed here to get good results (and a little touching in of the gaps too). I took several hours spread over several days to apply all the decals. Some are so small as to be almost invisible. The decals showed no sign of silvering at all. Shown on the Marking and Painting pages are decals 102 and 103 for the cockpit canopy but these were not included on the sheet with my kit.

Decal Rating = 7/10

Conclusion & Recommendations

My only real criticism is that the small moulded parts on the nose and the tail fin will invariably get broken while the kit is being assembled as they are so small. Inexperienced modellers will hate the decal sheet and find it easier to paint on most of the markings, whereas the more experienced will love the challenge and resulting colourful model. Apart from making the seat harness straps nothing else needs to be done to add detail to the cockpit.

At £9.99 this is the best 1/72nd F-16 based kit I know of. It is easily one of the simplest kits to assemble, there is no flash to trim, no filler needed and very little rubbing down to do. Highly recommended, a novice would enjoy making this one (apart from those decals) and so would the experienced modeller.

My thanks to Amerang for the review model.

Mike Kingsley.

Revell

Thank You

Scale Aviation Modeller International would like to extend our thanks to REVELL®, Binney & Smith (Europe) Ltd for the generous supply of paints and accessories from their extensive range.

AeroMaster

Thank You

Scale Aviation Modeller International would like to extend our thanks to AeroMaster for the generous supply of paints from their "Warbird Color" and "Warbird Acrylic Color" range.

HUMBROL

Thank You

Scale Aviation Modeller International would like to extend our thanks to Humbrol Ltd for the generous supply of paints and accessories from their extensive range.

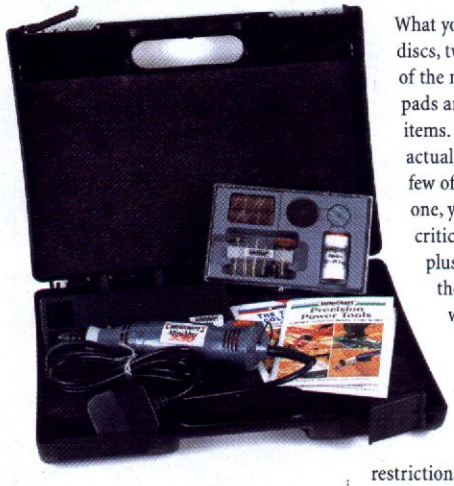
Minicraft

This company, no, not the model manufacturer, have produced an excellent new rotary tool, and a sample has been sent to us for evaluation.

MiniMax 230 Rotary Tool Set

This set offers the new MiniMax 230 rotary tool in a plastic carrying case complete with '100 accessories'. The case also includes a stand that will hold the rotary tool and a selection of the accessories.

I have had a Minicraft drill for nine years now and have always found it of great use. This new example is mains powered, and therefore includes the speed regulator in the top of the body instead of on a transformer. The on-off switch is also on the aft body of the drill, and the whole unit is easy to hold and operate. Opening and closing the jaws of the chuck is achieved via the pin near the front of the drill body. Holding this down while rotating the chuck will allow it to locate and hold the shaft. By continuing to rotate the chuck the jaws will open, and then you can change the accessory, reverse the process and close the jaws. No more looking for the chuck key - at last!



Now to those accessories. The box states you get 100, well don't be fooled! What you really get is 75 cutting discs, two grinding discs, eight each of the medium and coarse sanding pads and one each of the other seven items. So, what you really get is 11 actual accessories, but with just a few of them you get a couple, and one, you get loads of! This is not a criticism of the set, as these tools plus the drill would be more than the retail price of this set, but it would be refreshing if the box stated this.

Overall this is a stunning product and one we can recommend without any reservations or restrictions. No matter what amount of modelling you do per year, if you need a new drill, or are thinking about taking the plunge and getting one for the first time, look no further than the MiniMax 230.

Our thanks to Minicraft for the review sample.

Information

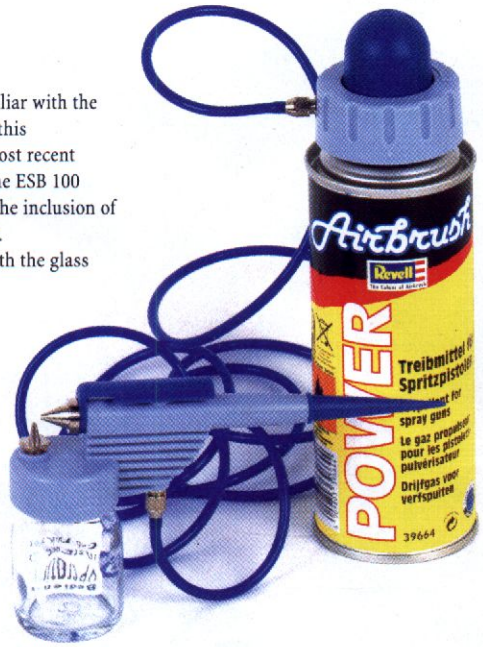
Worldwide Enquiries:
Minicraft, 1&2 Enterprise City,
Meadowfield Avenue, Spennymoor,
Co. Durham. DL16 6JF
Tel: 01388 420535 Fax: 01388 817182

Revell®

Many will already be familiar with the range of airbrushes from this manufacturer. Well, the most recent addition to the series is the ESB 100 'Beginner' airbrush with the inclusion of a 500ml can of propellant.

The airbrush comes with the glass siphon jar, air hose and propellant can adaptor cap.

I am sure that this pre-packed product will appeal to many, and I am sure they will be given as gifts to many lucky modellers. The gun is of course designed for people with little airbrushing experience, although the overall covering power of such a simple airbrush makes it ideal to purchase for the application of primer etc.



Overall, a good product suitable for the beginner and for general use, and one I am sure will sell well.

Our thanks to Revell® for the review sample.

Information

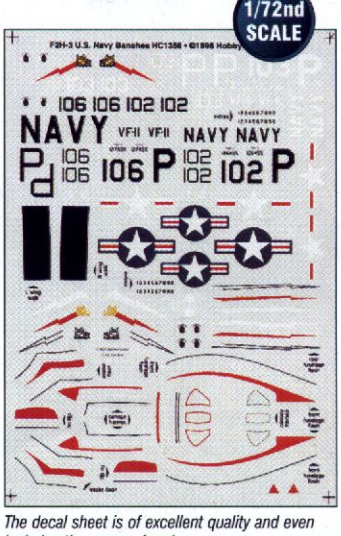
Worldwide Enquiries:
Revell®, Binney & Smith (Europe) Ltd,
Ampthill Road, Bedford. MK42 9RS
Tel: 01234 360201 Fax: 01234 342110

Re-Issue Reviews

McDonnell F2H-3/4 Banshee

Hobbycraft

The mouldings are of good quality, but a bit basic



The decal sheet is of excellent quality and even includes the canopy framing

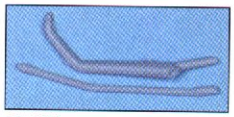
Technical Data

Kit: McDonnell F2H-3/4 Banshee 'US Navy'
Price: £10.99
Origin: Hobbycraft (Canada)
Panel Lines: Engraved √
Type: Injection Moulded Plastic
Parts: Plastic 51, Clear 1
Colour Options:
• 1. F2H-4, 126455, USN of VF-11 on USS Coral Sea in March 1956. This aircraft is overall blue.
• 2. F2H, 127555 of VF-11 on USS Coral Sea in March 1956. This machine is aluminium overall.
• 3. F2H, 126455 of VF-11 on USS Coral Sea in March 1956. This machine is Light Gull Grey over white.
Manufacturer: Hobbycraft Canada (see address elsewhere)
UK Importer: Pocketbond Ltd (see Advertisers Index)
Originally Issued: 1989

Prices: Please note that all foreign prices quoted within this section are those supplied by the manufacturer and therefore will be subject to conversion, shipping and import tax within the UK.

Delta Aviation Publishing

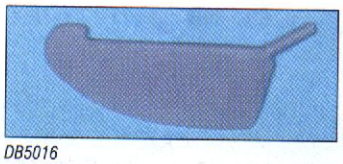
Subject: Israeli/Spanish F-4 IFR Probe
Scale: 1/72nd **Product No.:** DB5012
Type: Accessory
Designed for: Any F-4E/RF-4E kit
Parts: Resin 2
Price: £2.00



DB5012

This simple item allows you to fit the 'male' type in-flight refuelling probe to the F-4E or RF-4E Phantom. The two resin pieces comprise the resin insert to fill the existing 'female' IFR on the kit, and the new 'male' IFR probe.

Subject: SNJ-2 **Scale:** 1/72nd
Product No.: DB5016 **Type:** Conversion
Designed for: Heller T-6 kit
Parts: Resin 1, Vac-form 1
Price: £2.95

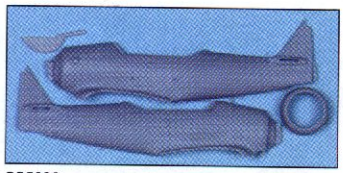


DB5016

Again a very simple set, this conversion comprises a new resin rudder to convert the T-6 Heller kit to the SNJ-2 version. The press release issued with these new sets states that the canopy in this one was 'delayed until November', so although our example was of course without this item, all current stocks should come with one.

Subject: Harvard Mk I **Scale:** 1/72nd
Product No.: DB5026 **Type:** Conversion
Designed for: Heller T-6 kit
Parts: Resin 5, Vac-form 1
Price: £9.00

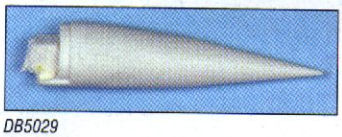
If those of you that work in 1/72nd scale



DB5026

thought you had missed out on the Harvard Mk I conversion from MDC (see elsewhere), then Delta have come to your aid with this smaller-scale version of the same subject. The conversion comprises a new resin 'fabric' fuselage and the revised engine cowling and they are offered as direct replacements for the Heller kit parts. The wing tips will have to be cut off and replaced with the new resin ones. Once again this conversion had the canopy 'delayed', although this should now be available.

Subject: MiG-25 Recce Nose **Scale:** 1/72nd
Product No.: DB5029 **Type:** Conversion
Designed for: Hasegawa kit **Parts:** Resin 1
Price: £8.50

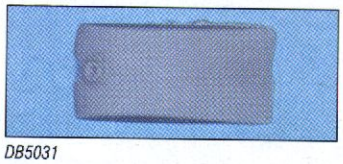


DB5029

This is a very simple conversion that just requires you to cut off the nose of the Hasegawa kit and replace it with the recce version. The only comment I would make is that the narrative instructions could have done with a diagram as far as the precise location of the cutting lines goes, as it is a bit vague.

Subject: Spitfire 30 gallon Slipper Camera
Scale: 1/72nd **Product No.:** DB5031
Type: Accessory **Parts:** Resin 1
Designed for: Any Spitfire FR.XIV kit
Price: £1.99

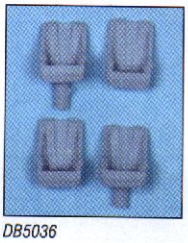
The title may seem confusing, but what



DB5031

you have here is a standard 30 gallon slipper tank for the Spitfire, which was modified and operated by the 2nd TAF for use following D-Day. The single resin item features the camera port in the centre/front of the tank and is designed as a simple add-on to any suitable FR Mk XIV kit.

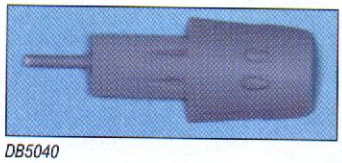
Subject: WW2 Fighter Aircraft Seats
Scale: 1/72nd **Product No.:** DB5036
Type: Accessory
Designed for: N/A **Parts:** Resin 4
Price: £2.75



DB5036

This set offers four WWII era fighter seats complete with moulded seat harness and they are suitable for a number of Allied types.

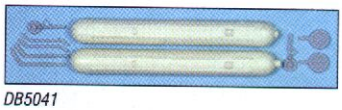
Subject: Focke Wulf Fw 190A (early) Cowl
Scale: 1/72nd **Product No.:** DB5040
Type: Conversion
Designed for: Revell kit **Parts:** Resin 1
Price: £2.50



DB5040

This conversion offers the earlier style upper engine cowling for the Fw 190A and is designed to allow you to convert the Revell Fw 190A-8 back to the previous versions.

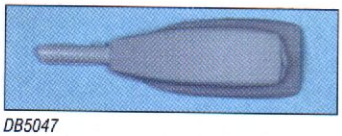
Subject: SH-19B Floats **Scale:** 1/72nd
Product No.: DB5041 **Type:** Conversion
Designed for: Airfix Whirlwind HAS.22 kit
Parts: Resin 10
Price: £8.50



DB5041

This conversion offers the floats fitted to the SH-19B and will allow you to add them to the recently reissued Westland Whirlwind HAS.22 kit. The two main resin parts are the floats, while the remaining pieces include the wheels for the floats and their support framework. The set also includes a length of plastic rod to make up the other supports.

Subject: Spitfire Tropical Filter
Scale: 1/72nd **Product No.:** DB5047
Type: Accessory **Parts:** Resin 1
Designed for: Any Spitfire Mk V
Price: £1.43



DB5047

As the title states, this is a tropical filter unit suitable for any Spitfire Mk V kit and can be installed once the associated area has been cut away from the kit.

All of these sets are well worth considering. The resin parts have been produced by MDC for Delta, so you know the quality you will be getting.

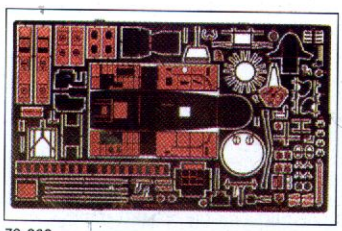
Our thanks to Delta for the review samples

Information

Worldwide Enquiries:
Delta Aviation Publishing, 38 Hawksley Avenue, Hillsborough, Sheffield. S6 2BE
Tel/Fax: 0114 233 4187
email: delavpub@compuserve.com

Eduard Model Accessories

Subject: Arado Ar 196A-2 **Scale:** 1/72nd
Product No.: 72-262 **Type:** Update Set
Designed for: Revell kit
Parts: Etched Brass 80, Acetate 2
Price: £6.45



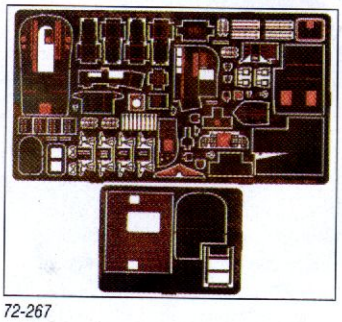
72-262

Being designed for an older kit, this set offers a completely new cockpit area 'tub' in brass. To this are added the seats, instrument panel (with acetate backing), rudder pedals and various radio and ancillary equipment. The rear gunner position gets a new 'hammock' seat and the MG 81Z gun gets a new ring sight.

Externally there are details for the engine and cowl, sway braces for the wing bomb racks and finally, lots of details for each float.

Subject: S-2F Tracker (Interior) **Scale:** 1/72nd
Product No.: 72-267 **Type:** Update Set
Designed for: Hasegawa kit
Parts: Etched Brass 80, Acetate 4
Price: £6.45

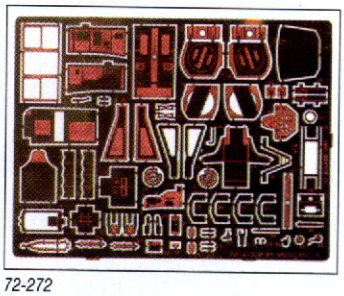
This two-fret set offers details inside the Tracker, as the title states. New crew seats are made up of brass with the headrest areas off the injected kit parts. A new cockpit rear bulkhead is also included along with the aft crew compartment floor, bulkhead and radio equipment racks. The new instrument panels have



72-267

acetate backing films and there is a new overhead control console for inside the canopy. The final items are the crew upper fuselage escape hatch and the rear fuselage crew access door.

Subject: N.A. P-51 Mustang I **Scale:** 1/72nd
Product No.: 72-272 **Type:** Update Set
Designed for: Italeri kit
Parts: Etched Brass 67, Acetate 1
Price: £5.45



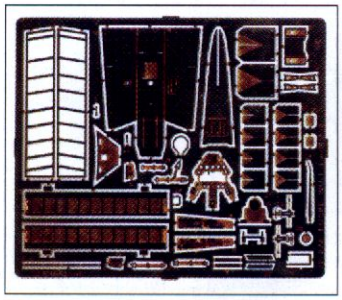
72-272

Designed for the some what 'flawed' Italeri P-51 kit, this set has new side-walls for the cockpit interior, a new instrument panel and acetate backing film, new rudder pedals, a completely new pilot's seat and harness, a revised cockpit floor, rear seat armour and seat harness.

Externally there are new doors for the tail wheel and main undercarriage. Final items include the supercharger door, pitot head, canopy frame and aerial

mast. There is also a set of fins for the bombs.

Subject: Focke Wulf Fw 190F-8 **Scale:** 1/72nd
Product No.: 72-274 **Type:** Update Set
Designed for: Hasegawa kit
Parts: Etched Brass 49, Acetate 2
Price: £5.45

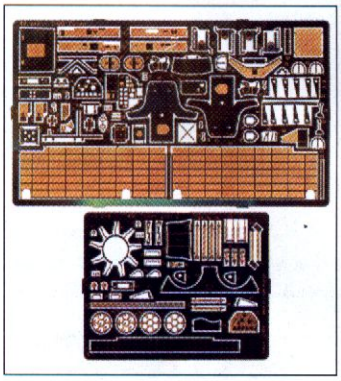


72-274

This set offers a completely new tub for the cockpit, side consoles, instrument panel (and acetate backing), rudder pedals and seat harness. The rear upper decking aft of the cockpit is included as is the armour plate for the headrest.

Externally there are compression links for the undercarriage legs, DF loop and FuG 16 antenna. The final items include a set of flaps and a new fin for the bomb.

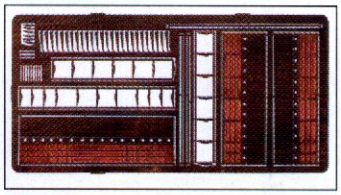
Subject: N.A. T-6G Texan **Scale:** 1/48th
Product No.: 48-248 **Type:** Update Set
Designed for: Ocidental kit
Parts: Etched Brass 104, Acetate 2
Price: £6.45



48-248

This two-fret set updates the interior of the Ocidental Harvard and offers additional details for the cockpit framework, new seats and seat harness, new rudder pedals and fuselage skinning overlays to fit into the fuselage halves between the cockpit framework. There are two completely new instrument panels, complete with acetate backing films and there is a detailed framework for the rear panel. The engine gets a new ignition harness and there is a new end to the exhaust pipe, although I think it easier to drill the kit part than to bend two bits of brass into a tube, one of which is at an angle! The final details in the set include some for the wheel wells, oleo torque links, the fronts and backs of the rocket launcher tubes and the elevator and rudder actuator horns.

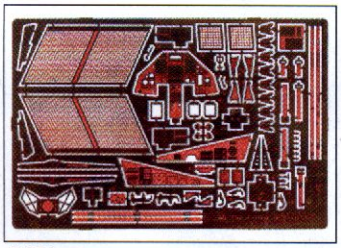
Subject: N.A. T-6G Texan Flaps
Scale: 1/48th
Product No.: 48-252
Type: Update Set
Designed for: Ocidental kit
Parts: Etched Brass 51
Price: £6.45



48-252

This fret offers a complete set of flaps for the Harvard. Unlike previous flap sets Eduard have used some of their experience from the 'strip down' series of kits, and the framework for the flaps in this set comes in single parts. All you have to do is bend the ribs in each though 90 degrees and fix in place. The remaining areas of the flaps however are the usual mass of single ribs and the need to thread them all onto tube etc.

Subject: F-117A Nighthawk **Scale:** 1/48th
Product No.: 48-254 **Type:** Update Set
Designed for: Tamiya kit
Parts: Etched Brass 69, Acetate 4
Price: £5.45



48-254

This single fret offers a completely new instrument panel, with acetate backing, and new side consoles for the cockpit interior of the F-117A. Straps and firing handle are supplied for the ejection seat, along with a new HUD support frame and lens. The canopy sills get new details and there are excellent fine screens for each engine intake.

Externally there are details inside each main wheel well, plus the nose well. New hinges for each undercarriage door are also included, and there are similar items for the bomb bay doors. The final items included are the compression links for each main oleo leg.

Overall each of these sets is up to the usual high standards we expect from Eduard and they can be recommended to all.

My thanks to Four Plus UK for the review samples.

Information

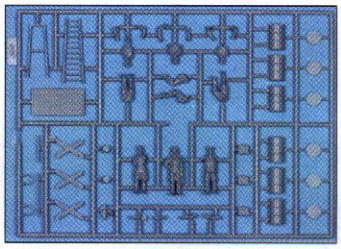
Worldwide Enquiries:
Eduard MA (see Advertisers Index)
Source: Four Plus UK, 29 Westwood Gardens, Hadleigh, Benfleet, Essex. SS7 2SH
Tel/Fax: 01702 559308

ICM

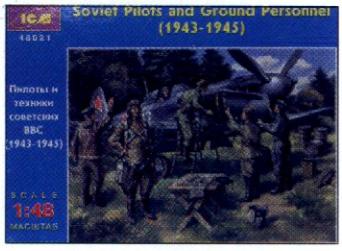
Subject: Soviet Pilots and Ground Personnel (1943-1945) **Scale:** 1/48th
Product No.: 48021 **Type:** Accessory
Parts: Injection Moulded Plastic 51
Price: £5.49

This is an excellent set of figures from ICM which are obviously designed with their Yak-7 and 9 kits in mind. The injected plastic parts are beautifully detailed with no signs of shrinkage or surface imperfections. The facial features on the figures are excellent and all of them will benefit greatly from careful painting and colour washes.

The equipment offered with the set includes a wooden workbench, a vice, three oil/petrol drums, three 'jerricans',



48021



two pails and a set of steps. Each of these items is again nicely detailed and the wood effect on the table is most effective.

Painting instructions are given in full colour on the back of the box and the single (A4 sized) instruction sheet lists all applicable colours by Humbrol and Testors paint ranges.

This is an excellent set, that can be highly recommended. It is great to have such details for Russian subjects at last and I only hope that this is not the last such set from ICM. Buy a couple!

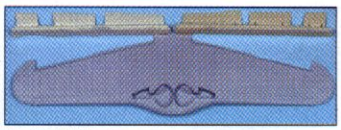
Our thanks to Pocketbond Ltd for the review sample.

Information

Worldwide Enquiries:
ICM, PO Box B59, Kyiv, 252001. Ukraine.
UK Importer: Pocketbond Ltd

MisterKit

Subject: Fiat G.50 Wing **Scale:** 1/48th
Product No.: N/K **Parts:** Resin 7
Type: Correction & Update Set
Designed for: Sector/Hasegawa kits
Price: £TBA



The Fiat G-50 wing

This is a simple replacement wing, complete with separate flaps and ailerons for the Sector or Hasegawa Fiat G.50. The single piece resin wing features finely engraved panel lines and the wheel wells include those prominent 'bumps' in the back of each. The air intakes on either side of the fuselage on the leading edge are also given and the whole item corrects the details offered in the above kit examples. The flaps come in two parts per side and these have engraved details, while the ailerons are similarly detailed.

This is a simple and effective way to update the Sector/Hasegawa kits and the quality of the resin parts in the set make it one we can recommend to all.

Our thanks to MisterKit for the review sample.

Information

Worldwide Enquiries:
MisterKit S.a.S, via Monte Amiata 31, 20089 Rozzano, Milan, Italy.

Cutting Edge Modelworks

Subject: Vickers 'K' machine gun
Scale: 1/48th **Product No.:** CED48125
Type: Accessory **Designed for:** N/A
Parts: Resin 7, Brass 1
Price: £TBA

CED48125

This is a stunning little Vickers machine gun and the main gun itself is beautifully cast in brass, with three ammo drums, three spent cartridge bags and the mounting block cast in resin. Detail on both mediums is extremely good, the gun itself being very fine.

This sort of gun is applicable to a number of types, but in relation to recent kits, it would be suitable for the Tamiya Beaufighter and the Fairey Swordfish (MDC, or possibly Tamiya!).

This is a stunner, and one we can recommend to all.

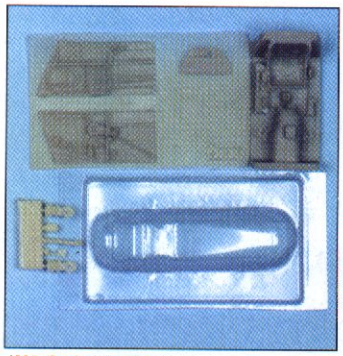
Our thanks to Cutting Edge Modelworks for the review sample.

Information

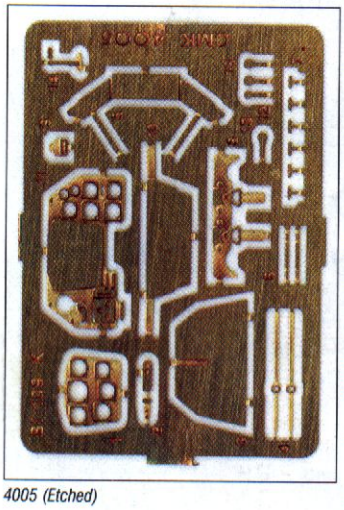
Worldwide Enquiries:
Cutting Edge Modelworks, PO Box 3956, Merrifield, VA 22116, USA
UK Source: Hannants Tel: 01502 517444

CMK

Subject: Messerschmitt Bf 109G/K
Scale: 1/48th
Product No.: 4005
Type: Interior Update
Designed for: Hasegawa & Fujimi kits
Parts: Resin 9, Etched Brass 24, Vac-form (Clear) 1, Acetate 2
Price: £TBA



4005 (Resin & Vac-form)

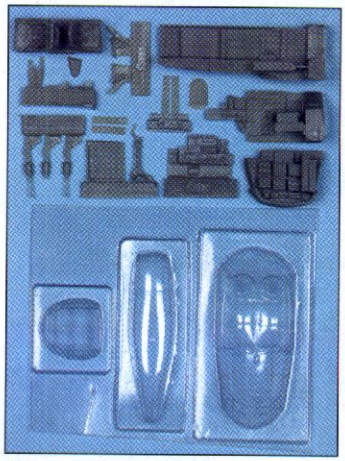


4005 (Etched)

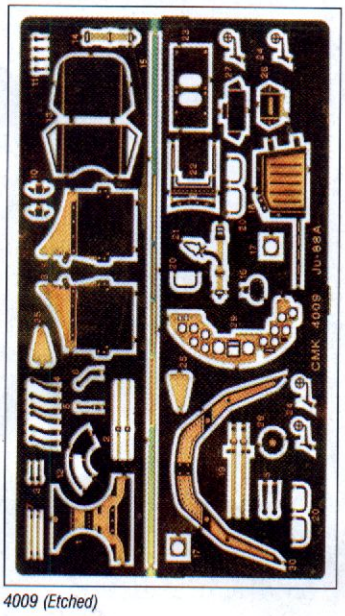
This set updates the interior of any of the late series G and K Bf 109s from Hasegawa and Fujimi (specifically G-10 to K-4) and the resin parts comprise a cockpit tub with rear bulkhead, sidewalls, rudder pedals, cannon breech housing, control column, gun sight and canopy release lever. The etched parts are the usual instrument panel fronts (with acetate backing film), armoured-glass surround, rear bulkhead access panel, seat harness, rudder pedal straps, windscreen grab-handles and a number of 'T' handles and levers. The clear part, as you would expect, is a new canopy and this is offered in the 'Galland' style.

Subject: Junkers Ju 88A
Scale: 1/48th
Product No.: 4009
Type: Interior Update
Designed for: Revell/Monogram & Dragon kits
Parts: Resin 20, Etched Brass 57, Vac-form (Clear) 3, Acetate 2
Price: £TBA

This is an excellent set that will deal



4009 (Resin & Vac-form)



4009 (Etched)

with the lack of interior detail in the Revell/Monogram kit, or the version marketed by Dragon.

The resin parts consists of a new cockpit floor, crew seats, rear bulkhead and radio equipment, seat armour, control column, the back of the instrument panel, sidewall details and all of the machine guns. The etched parts offer seat harness, rudder pedals, various levers, instrument panel (with acetate backing) folding crew seat, machine gun locking straps, sights and a mass of other small details. The vac-formed clear sheet offers a new 'bug-eyed' canopy, forward nose glazing and the ventral gondola.

Each of these products is cast to the highest quality and they can be highly recommended to all. I am very pleased to see the interior update for the Ju 88A, as this is the area of the Revell kit which has been giving me (and many others I am sure) a lot of grief of late.

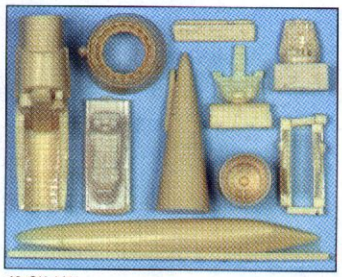
Our thanks to CMK for the review samples

Information

Worldwide Enquiries:
CMK Ltd., Magistru 18, 140 00 Praha 4, Czech Republic.

Eagle Designs

Subject: IAI Nesher/Dagger **Scale:** 1/48th
Product No.: 48-CK-13H **Type:** Conversion
Designed for: Heller Mirage IIIB/C kit
Parts: Resin 11
Price: £TBA

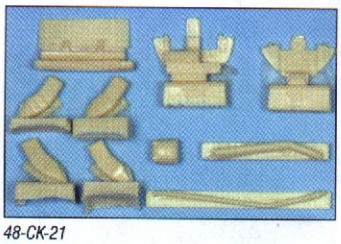


48-CK-13H

This conversion, as stated above, is designed for use with the Heller Mirage IIIB/C kit and the resin parts include a ventral fairing (fitted near tail), exhaust outlet (and rear fuselage section), engine insert (to go in front of the previous item), new nose, coaming above the instrument panel, instrument panel, pitot, ejection seat, new cockpit 'tub' and machine gun port insert panels.

Conversion of the kit will require surgery to allow the fitment of the new nose and tail, but the cockpit tub should just slot into the kit. There is an A4 instruction sheet with two scale views and a narrative description of the installation and use of the conversion, and although it is sufficient, I am sure many would have liked a bit more help with this set.

Subject: Kurnass 2000 **Scale:** 1/48th
Product No.: 48-CK-21 **Type:** Conversion
Designed for: RF-4 Phantom **Parts:** Resin 10
Price: £TBA

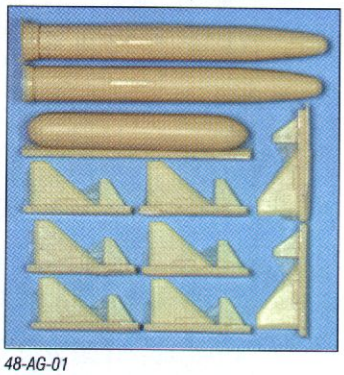


48-CK-21

This set will update the RF-4 Phantom to the Kurnass 200 configuration and the resin parts include new instrument panels, a refuelling probe (in two parts), the four IRCM pods for either side of each weapon pylon, the ECM bulge under the nose and an adaptor for the fitment of a Sidewinder missile to the Sparrow-bay pylon.

Subject: Rafael Popeye/AGM-142 **Scale:** 1/48th
Product No.: 48-AG-01 **Type:** Accessory
Designed for: F-4 Phantom **Parts:** Resin 19
Price: £TBA

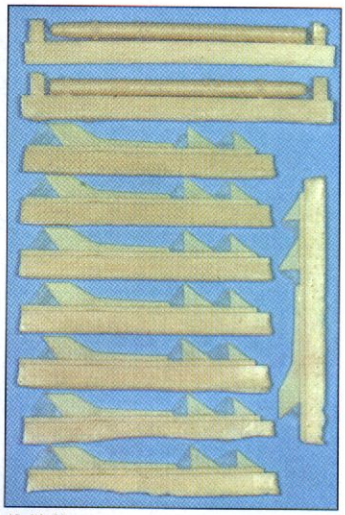
This set offers two complete AGM-142 missiles and a guidance pod. Each missile is made up of the main body, and four each of the mid and aft fins. The missiles should also have a clear nose, and four very small fins on the extreme nose, but none of these items are included in this set. The nose is cast solid, so some cutting and glazing will



48-AG-01

be required for the correct effect. The finlets are shown in the small instruction sheet, but no actual 'scale' dimensions are given, so you will have to trust to luck on these parts!. The guidance pod is a single item and is devoid of any details or panel lines.

Subject: Rafael Phyton 4 **Scale:** 1/48th
Product No.: 48-AA-02 **Type:** Accessory
Parts: Resin 26
Price: £TBA



48-AA-02

Each of the missiles in this set is made up of a main body, rear fin and vane, plus all eight of the fore-fins. Four additional oblong finlets are required and have to be made from plastic card, although once again no 'scale' dimensions for these items are included on the instruction sheet.

Overall these products are good, although on inspection you will see that the resin looks 'frothy'. This results in a lot of small air bubbles near the pour points, and, I suspect, there will be a few more uncovered if you start sanding any of the main parts. The instructions do include clear diagrams of each item, along with colour notes and F.S. references. The lack of templates for the missing fins is a down point, but overall all of these items can be recommended to the more experienced modeller.

Our thanks to Delta Aviation Publishing for the review samples.

Information

Worldwide Enquiries:
Delta Aviation Publishing (address elsewhere)
Tel/Fax: 0114 233 4187
email: delavpub@compuserve.com

Leading Edge Models

The most recent sheet from this source has made its way directly to us from the manufacturer.

72.15: Canadian Armed Forces T-33 (Metal/Red Scheme)

- 1. CT-133, 133625 of No. 414 Squadron (Black Knights).
- 2. CT-133, 133504 of Cold Lake Base Flight, CFB Cold Lake, Alberta
- 3. CT-133, 133190 of the Aerospace Engineering test Establishment, CFB Cold Lake, Alberta.

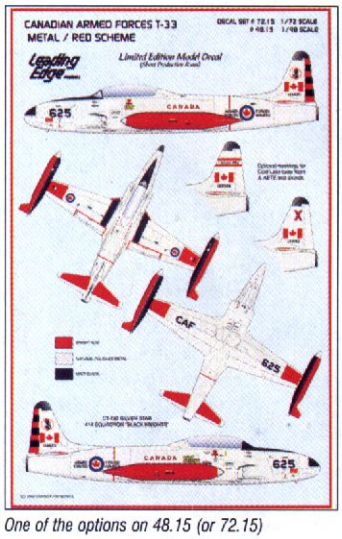
All of these options are natural, polished metal overall with the wing tip tanks, tailplanes, rudder and wing tips in bright red. The inner faces of the tip tanks are black, as is the anti-dazzle panel and the stripes on the rudder.

The decal sheet includes all the unique markings for each option, plus one complete set of stencils and the anti-dazzle and wing walkway markings

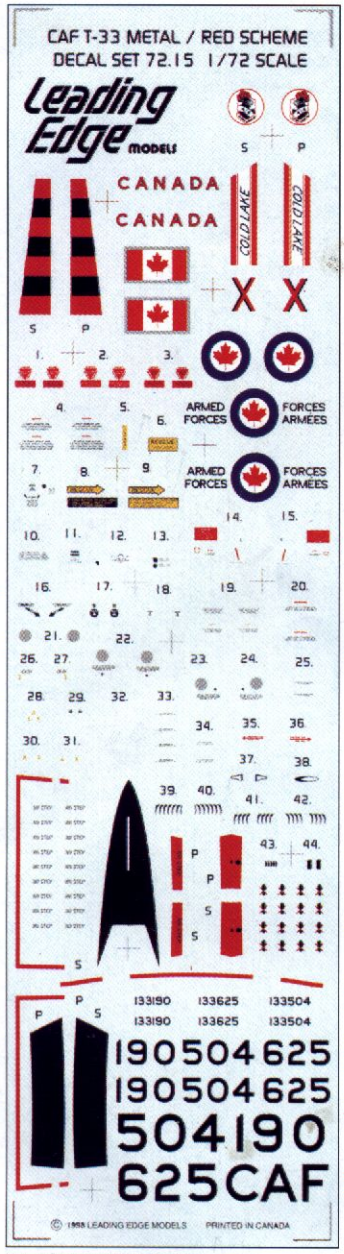
These options can also be obtained in 1/48th scale as product 48.15. The 1/72nd scale version retails for $4.00, while the larger example is $4.75.

Overall these sheets are up to the usual high standards we expect of Leading Edge Models and they can be highly recommended to all.

Our thanks to Leading Edge Models for the review samples.



One of the options on 48.15 (or 72.15)



The decal sheet from 72.15

Information

Worldwide Enquiries: Leading Edge Models, E.83 Skyline Crescent, NE, Calgary, Alberta, T2K 5X2, Canada
Tel/Fax: (403) 274-77874

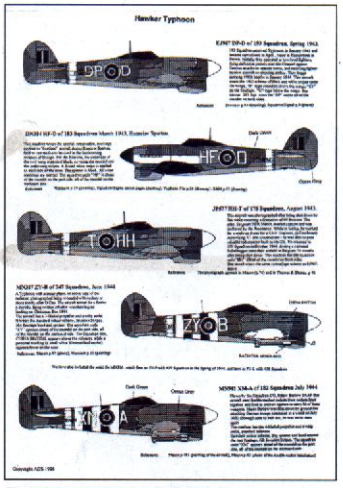
ADS Decals

Last month we reviewed the 1/32nd scale sheet dealing with the Typhoon that ADS had released (see Vol 5 Iss 1 Page 27). Now the 1/48th and 1/72nd scale examples are available, so we will give you a recap on what each contained;

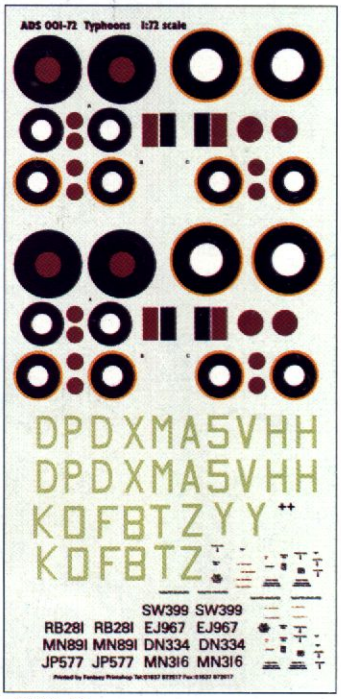
ADS 001-72: Hawker Typhoon

- 1. EJ967, DP•D of No. 193 Squadron in the spring of 1943.
- 2. DN334, HF•D of No. 183 Squadron during 'Exercise Spartan' in March 1943. Apart from the standard scheme this aircraft has the entire port lower wing black and wide bands of white either side of the nose.
- 3. JP577, HH•T of No. 175 Squadron in August 1943.
- 4. MN317, ZY•B of No. 247 Squadron in June 1944. This machine has full invasion stripes.
- 5. MN981, XM•A of No. 182 Squadron in July 1944. Once agin this machine has full invasion stripes.
- 6. RB281, 5V•X of No. 439 Squadron (RCAF) in February 1945. This machine shot down an Me 262 on the 14th February 1945.
- 7. SW399, HH•K 'Babs VIII' of No. 175 Squadron in June 1945.

Each of these options is in the standard scheme of Dark Green and Ocean Grey over Medium Sea Grey.



Five of the options on ADS 001-48



ADS 001-72

The decal sheet includes a complete set of stencils and national insignia for one option, plus all the codes and serial numbers for each of the seven aircraft. These options can also be obtained in 1/48th scale as sheet ADS 001-48.

The decal sheet is well printed, with excellent colour density and little excess carrier film. The images are all in perfect register with a nice shiny finish and they can be highly recommended to all. The UK price for these sheets is £4.95 each (both scales).

As a final note, the price we stated for ADS 001-32 last month (£7.95) was incorrect, as this sheet retails for £9.25.

Our thanks to ADS for the review sample.

Information

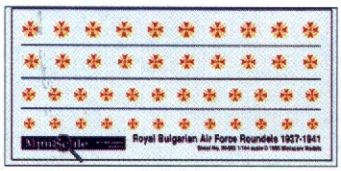
Worldwide Enquiries: ADS Decals, P.O. Box 1768, Bristol. BS37 5FS
Tel/Fax: 01454 850119

Blue Rider Publishing

We will start this month with a look again at the sheets from this source which we reviewed last month (See Vol 5 Iss 1 Page 23). Unfortunately, the decal sheets for the bulk of the subjects covered were not included. Therefore what follows is a brief recap on the subject of each sheet along with the actual corresponding decal sheets;

1/144th Scale

MS-005: Bulgarian Roundels 1937-1941.



MS-005

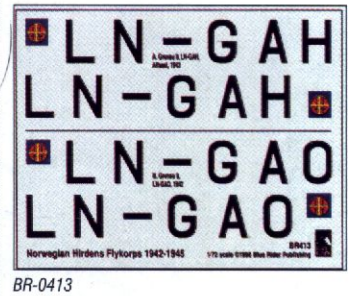
BR-0812: Macedonian & Estonian Air Force.

BR-0812

BR-2102: Aeroflot Lisunov Li-2

BR-2102

BR-0413: Hirdens Flykorps 1942-45.



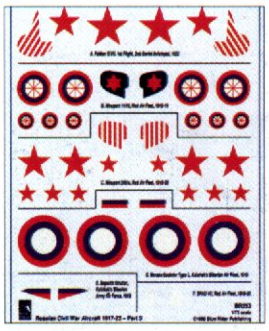
BR-0413

1/72nd Scale

BR-0252: Russian Civil War - Part 2.

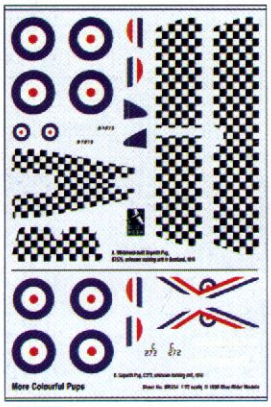
BR-0252

BR-0253: Russian Civil War - Part 3



BR-0253

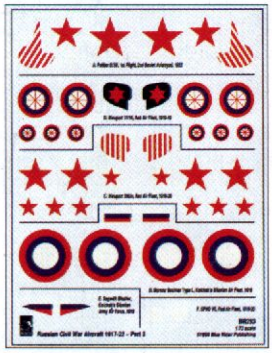
BR-0254: Colourful Sopwith Pups

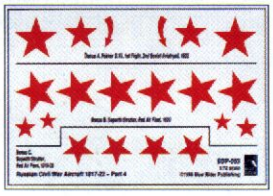


BR-0254

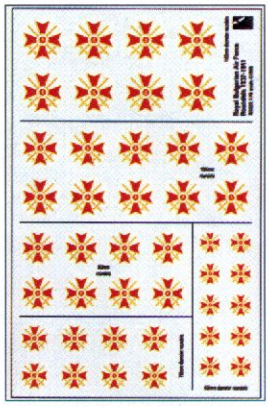
BDP-003: Russian Civil War 1917-1922.

BDP-003



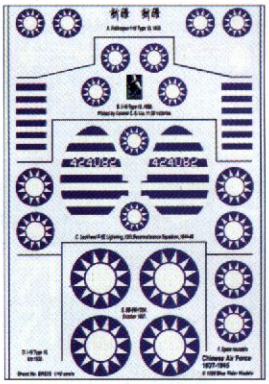


BR-0522: Bulgarian Roundels 1937-41.



BR-0522

BR-0523: Chinese Air Force 1937-45



BR-0523

BR-0524: Russian Civil War - Part 2

BR-0524

BR-0601: An American Messerschmitt in Rumania.

BR-0601

Our apologies to Blue Rider and our readership for this omission.

Information

Worldwide Enquiries: Blue Rider Publishing, 43A Glasford Street, London. SW17 9HL

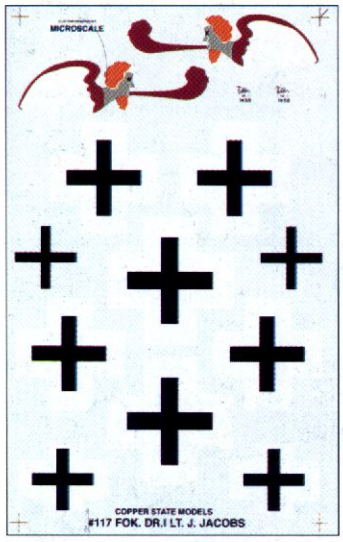
Copper State Models

The most recent item produced by this American manufacturer is a new decal sheet, and a sample has made its way directly to us.

1/28th Scale

CSM 117: Fokker Dr.I

• 1. Fokker Dr.I, 1450, flown by Lt. Josef Jacobs of Jasta 7 in 1918. This machine is

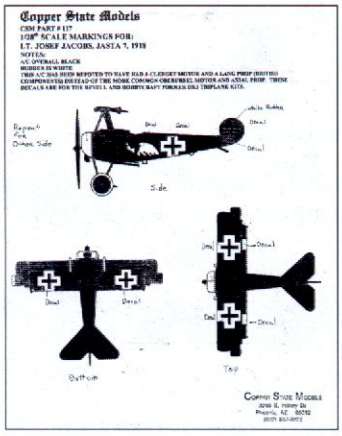


The single option offer on CSM 117

black overall with the rudder in white. A prominent winged figure is applied to either side of the fuselage below the cockpit and wing crosses are applied in six locations. This machine is reported to have had a Clerget engine and Lang propeller fitted (both British equipment) instead of the usual Oberursel engine and Axial propeller.

This sheet can be used with either the Revell® or Hobbycraft kits and the images are all very well printed by MicroScale, so you can be assured of their overall quality. The retail price for this sheet is $5.99, although we have no details of a UK price.

Our thanks to Copper State Model for the review sample .



CSM 117

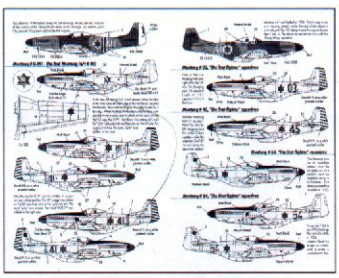
Information

Worldwide Enquiries: Copper State Models Tel: (602) 867 8822 **UK Source:** Aeroclub

IsraDecal

The following three new sheets have been passed to us by this manufacturer;

IAF-7: Israeli AF P-51D Mustang



Some of the P-51 options offered on IAF-7

• 1. P-51D, D-190. This was the first P-51 in the Israeli Air Force and is depicted here as it was during the Independence War in 1948. This machine is natural metal overall with a matt black anti-dazzle panel, a red spinner and red and white striped rudder.

The aircraft is also offered as it was in the 1956 campaign when it was camouflaged.

• 2. P-51D, D-191. This was the second P-51 in Israeli Air Force service and is offered in three schemes. The first two being bare metal overall and the third being in the camouflaged scheme.

• 3. P-51D '03' of 101 Squadron just after the 1948 war. This machine is in the same scheme as option 1.

• 4. P-51D, '45', 101 Squadron. This machine is in the same scheme as the previous option, although the fuselage stars are smaller.

• 5. P-51D, '53' of No. 101 Squadron. This machine does not carry the red and white stripes on the rudder, although the No. 101 Squadron insignia is applied to each side of the vertical fin.

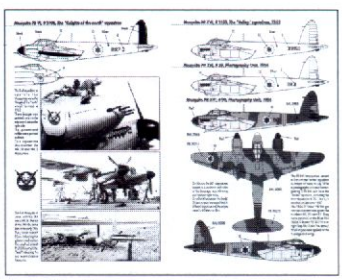
• 6. P-51D, '64' of No. 101 Squadron. This machine is in the same scheme as the previous option.

• 7. P-51D '42' of 'Scorpion' Squadron in 1956. This machine is camouflaged in Blue and Brown over Light Grey with the spinner in yellow.

• 8. P-51D, '54' of 'The Flying Wing' Squadron in 1956. This machine is in the same scheme as the previous option, although the spinner on this machine is red.

The one and a half decal sheets in this set offer both 1/72nd and 1/48th scale markings for each of the above options.

IAF-8: Israeli Air Force's Mosquitoes



Four of the Mosquito options offered on IAF-8

• 1. Mosquito T.III, 2125 of the 'Valley' Squadron. This machine is yellow overall with the spinners and rudder in red.

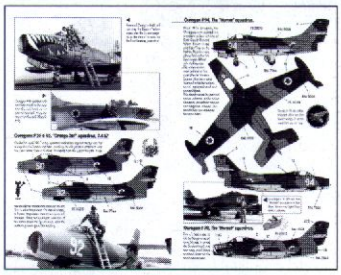
• 2. Mosquito T.III, '63' of the 'Knights of the

North' Squadron in 1945. This one is yellow overall with the spinners and rudder in black.
• 3. Mosquito FB Mk VI, '2106' of the 'Valley' Squadron. This machine is silver overall with the spinners and rudder in red and nose art applied to the starboard side of the nose.
• 4. Mosquito FB Mk VI, '2127' of the 'Knights of the North' Squadron. This machine is silver overall with the spinners and rudder in black.
• 5. Mosquito PR Mk XVI, '2150' of the 'Valley' Squadron in 1952. This machine is silver overall.
• 6. Mosquito PR Mk XVI, '39' of the Photography Unit in 1954. This aircraft is silver overall.
• 7. Mosquito PR Mk XVI, '90' of the Photography Unit in 1956. This machine is Blue and Brown over Light Grey with red spinners.
• 8. Mosquito NF Mk 30, '59' of the 'Knights of the North' Squadron. This aircraft is black overall.
• 9. Sea Mosquito TR.33, IDAF 4x3186. This machine is shown silver overall with the delivery numbers applied to either side of the fuselage.
• 10. Sea Mosquito TR.33, '75' of the 'Valley' Squadron in 1955. This one is silver overall with the spinners and rudder in red and 'Mighty Mouse' artwork applied to the crew access door.

Once again the decal sheet offers both 1/72nd and 1/48th scale versions and the two sheets offer all the unique markings for each option plus a number of national insignia.

IAF-9: Israeli Air Force's Ouragan

• 1. Ouragan No. 28 of the 'Hornet' Squadron. This machine is offered in three schemes. The first is how the machine appeared in the 1956 campaign in natural metal overall, the next has the sharksmouth applied and the final option is the Blue and Brown over Light Grey camouflage scheme.



Four of the Ouragan options from IAF-9

• 2. Ouragan No. 50 and Np. 92 of the 'Orange Tail' Squadron on the 7th April 1967. These two machines are in the Blue and Brown over Light Grey camouflage scheme.
• 3. Ouragan No.94 of the 'Hornet' Squadron. This machine sports the new camouflage scheme of Dark Greyish Blue and Warm Brown over Light Grey
• 4. Ouragan No. 70 of the 'Hornet' Squadron. This machine carries sharksmouth and a Mickey Mouse artwork on the port mid-fuselage side.
• 5. Ouragan No. 23 of the 'Hornet' Squadron. This machine sports the 1968 camouflage scheme of Sand , Green and Brown over Light Blue.
• 6. Ouragan No.18 of the 'Hornet' Squadron. This aircraft is in the same scheme as the previous option.

Overall all of these sheets are to the highest quality. The clarity and registration are perfect and the subject matter makes them very attractive to many. I for one love the Mosquito sheet and look forward to more of the same!

Our thanks to IsraDecals for the review samples.

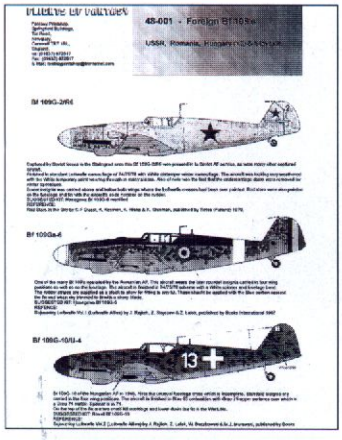
Information

Worldwide Enquiries: IsraDecals, 3 Duda'im St., Kefar-Saba 44288, Israel.
Fax: 972 9 7404368 Email: weiss@shani.net

Fantasy Printshop

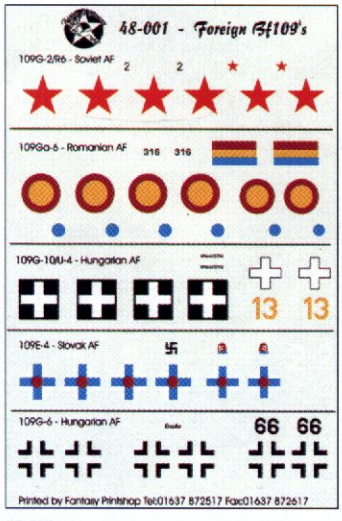
These are the first two sheets in a new series entitled 'Flights of Fantasy' from this well known decal printer.

48-001: Foreign Bf 109's



Three of the options from 48-001

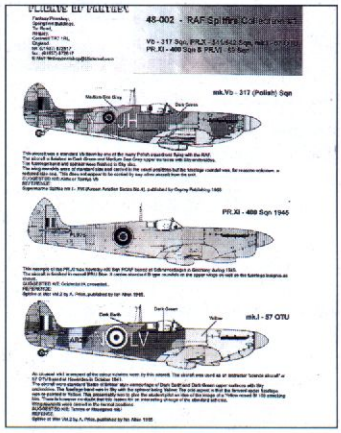
• 1. Bf 109G-2/R6. This machine was captured and evaluated by the Russian Air Force and is in winter distemper over RLM 74/75/76
• 2. Bf 109Ga-6. An export variant operated by the Rumanian Air Force. This machine is RLM 74/75/76.



48-001

• 3. Bf 109G-10/U4 of the Hungarian Air Force in an RLM 74/75/63 scheme.
• 4. Bf 109E-4 of the Slovak Air Force in an RLM 70/71/76 scheme.
• 5. Bf 109G-6 flown by Hungarian ace Lt. Laszio Molnar.

48-002: RAF Spitfire Collection #1

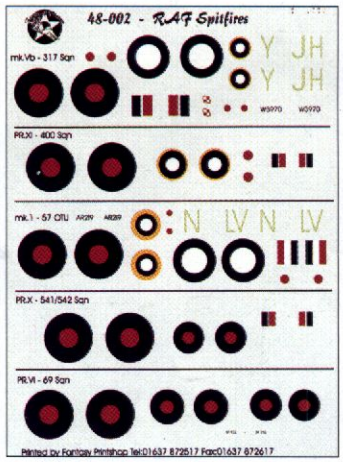


Three of the options from 48-002

• 1. Spitfire Mk Vb, W3970, JH•Y of No. 317 (Polish) Squadron in a Dark Green and Medium Sea Grey over Sky scheme.
• 2. Spitfire PR Mk XI, PL975 of No. 400 Squadron (RCAF) in overall PRU Blue.
• 3. Spitfire Mk I, AR219, LV•N of No. 57 OTU operated as a 'bounce aircraft' in a Dark Green and Dark Earth over Sky scheme with the nose in yellow.
• 4. Spitfire PR Mk X, MD194 of No. 541/542 Squadron in overall PRU Pink.
• 5. Spitfire PR Mk VI, BP932 of No. 69 Squadron in an overall Dark Royal Blue scheme.

Each sheet includes all the national and unique markings for each option, but no stencilling. The quality of the printing and colour density is excellent and carrier film minimal. Finally, and before you all start writing to me, yes, these are identical (albeit in the bigger scale) to the subjects in the sheets from Delta Aviation Publishing that we reviewed last month (See Vol 5 Iss 1 Page 27).

Our thanks to the Fantasy Printshop for the review samples.



48-002

Information

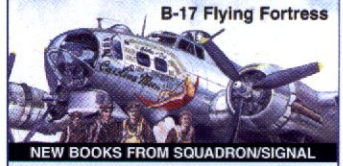
Worldwide Enquiries: The Fantasy Printshop (see Advertisers Index)

AVAILABLE IN GOOD MODEL SHOPS

squadron/signal publications

Walk Around

B-17 Flying Fortress



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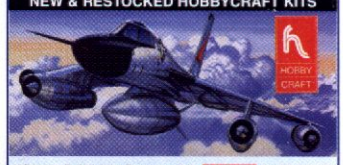

HC1260	B-58A "1st Supersonic"	OUT NOW	1/144	£10.99
HC1261	B-58 "Record Setters"	OUT NOW	1/144	£10.99
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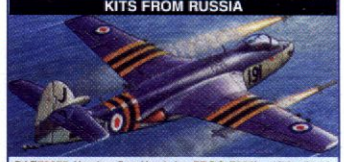

RAE72275	Hawker Sea Hawk (ex FROG F328)		1/72	£3.95
RAE72254	Fairey Barracuda (ex FROG F161)		1/72	£4.99
RAE72271	BAC Lightning (ex FROG F266)		1/72	£6.99
RAE72276	Supermarine Attacker (ex FROG F330)		1/72	£3.95
RAE72225	G-11 WWII Soviet Assault Glider		1/72	£5.75
RAE72209	LaGG-5	NEW	1/72	£4.99
RAE72317	Il-2T Stormovik w/torpedo	NEW	1/72	£8.99

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UTK144	LaGG-3 66 Series	NEW	1/72	£5.99

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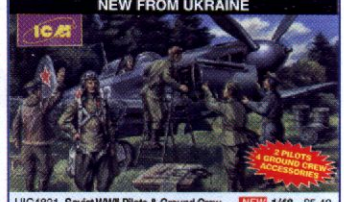
NEW FROM UKRAINE



UIC4821	Soviet WWII Pilots & Ground Crew	NEW	1/48	£5.49
UIC4831	YAK-7: new series of kits	COMING SOON	1/48	£TBA

UA7216	Shavrov Sh-2 (Amodel)	1/72	£6.95
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Quick Build North American T-6G Harvard

David Batt builds the Ocidental Models North American T-6G as a Harvard II from W.W.2

Considering that aviation history spans less than a century, and regarding the advances in technology that have gone hand in hand with that history, it's remarkable to consider that some specific aircraft have been in active use for several decades. Just one of these is the remarkable North American T-6, introduced in the thirties as an advanced trainer, used in the fifties and beyond by various nations as a Counter Insurgency aircraft, and remaining as a mainstay of the 'Warbird Circuit' as the millennium approaches.

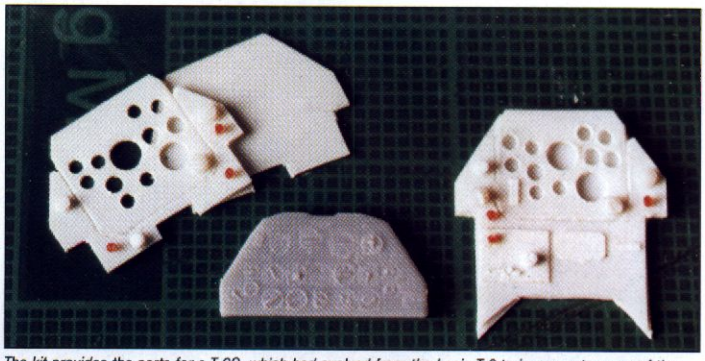
The 1/48 scale enthusiast had been well served by the Monogram offering for several decades, but this particular kit had become difficult to find and was showing its age in some areas. Few modellers working in this scale would have remained unmoved by the announcement that a new Texan was to be produced by a new company, feeling a sense of anticipation mixed with all the apprehension that such an unknown quantity as a new manufacturer can produce.

Personally I'd suggest that the wait was well worth it, for though the kit doesn't quite have the level of presentation of the latest Oriental or American offerings it's by no means sub-standard, and the price is phenomenal - there's enough change out of £15.00 to go and have a celebratory pint! One thing I was surprised by was the abbreviated decal sheet, which offered but one option even though a flamboyant French aircraft is shown on the instructions in addition to the Portuguese type shown on the box top.

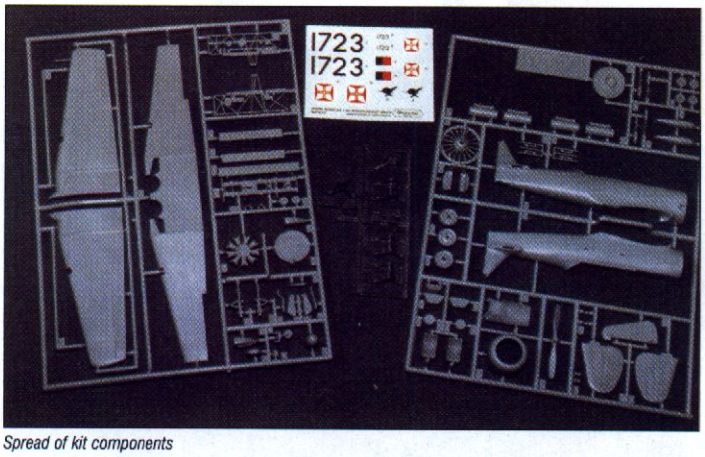
Built straight out of the box the kit will assemble with minimal effort into a very neat replica of a Portuguese COIN T-6G, and I did try the decals out on a test plane (an Xtrcolor'd model that'll never be finished) and can confirm they work very well, settling down neatly onto the gloss surface without any additives but reacting very well to Aero-set and Aero-sol if the 'perfect' finish is wanted.

Just to be awkward . . .

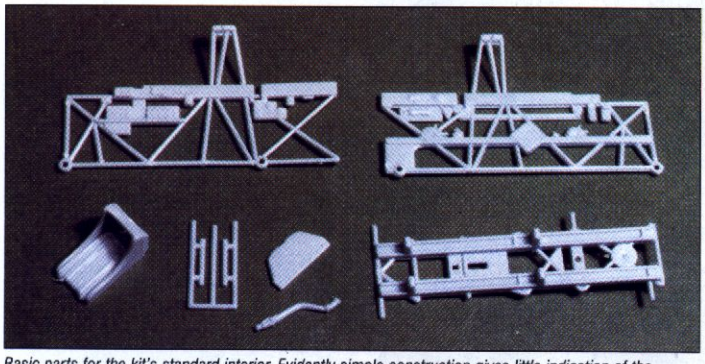
My preferred period is WW2, so I had to 'convert' the kit into a wartime Harvard II. I had seen reference to ways in which the earlier Harvard/T-6 had been modified to incorporate the instrument layout and major control style of the P-51 and that the RAF Harvards were fitted with the familiar RAF less well organised, so I made replacement panels from thin plastic card and used Reheat decals for the instrument faces. The 'sticks were made from plastic rod and sections of plastic tube using the Pilot's Notes photographs as a guide. Some work was also needed around the side consoles, particularly the undercarriage and flap selectors and the production of an emergency hydraulic pump.



The kit provides the parts for a T-6G, which had evolved from the basic T-6 to incorporate many of the layout and instrumentation features of the P-51. However, I had to produce the less well organised cockpit of the Harvard II, and these scratch-built instrument panels were made up using facsimile 'Pilots' Notes' from the RAF Museum Hendon as a guide.



Spread of kit components



Basic parts for the kit's standard interior. Evidently simple construction gives little indication of the impressive appearance when finished straight out of the box

spade grips to the 'sticks, so some extra research work was needed here. (It's great building 1/48 scale so you can see interior detail, but there's a flip side to the argument!)

I bought a facsimile copy of the 'Pilots' Notes' for the Harvard 2B from the RAF Museum at Hendon, which provided more information that I could comfortably use. The instrument panels were noticeably different from the kit's, being considerably larger and

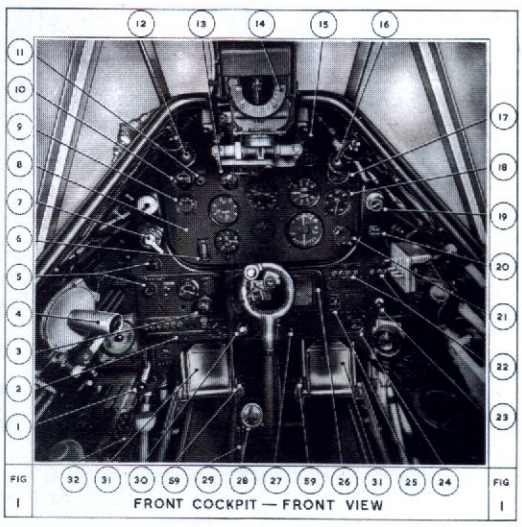
While this was going on I also replaced various kit parts with items from Reheat generic sets, the American set for the seats and rudder pedals and the British set for the seat harnesses.

With the cockpit interior completed assembly proceeded without any major hitches. Fit of all parts is excellent, with the exceptions of the tailplane halves (where the radius on the mating edge of the tailplane is too great and

KEY TO *Fig. 1*

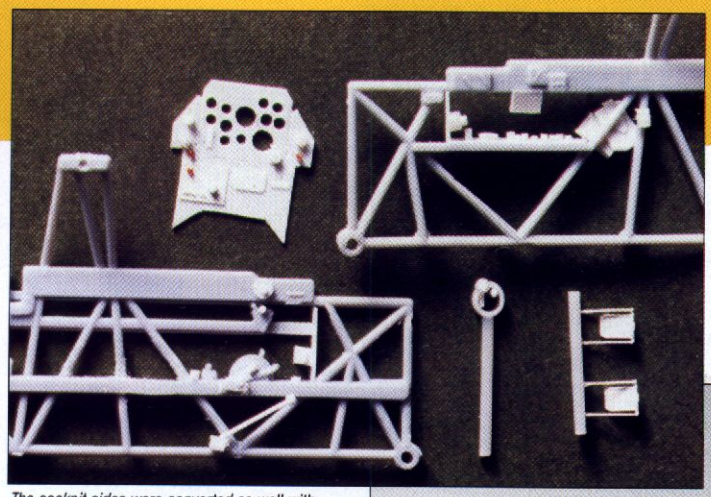
1. Air intake heat control.
2. Switch bank. From left to right: Navigation lights. Left landing lamp. Right landing lamp. Fuel gauge lights. Pressure head heater. Oil dilution. Bomb master switch.
3. Ultra-violet instrument lighting dimmer switch.
4. Gyro gun-sight range control and throttle lever.
5. Red cockpit light dimmer switches.
6. Suction gauge.
7. Ignition switch.
8. Clock location.
9. Carburettor mixture thermometer.
10. Cylinder head temperature gauge.
11. Undercarriage warning light.
12. Port ultra-violet instrument light.
13. Outside air temperature gauge.
14. Gyro gun sight.
15. Combined oil pressure, oil temperature and fuel pressure gauge.
16. Starboard ultra-violet instrument light.
17. Boost gauge.
18. R.p.m. indicator.
19. Priming pump.
20. Parking brake control.
21. Stop watch holder.
22. Bomb selector switches.
23. Static pressure selector switch.
24. Camera and gun air pressure gauge.
25. Gyro gun-sight master switch.
26. Pilot's locker, with signal pistol stowage inside.
27. Starter switch.
28. Foot operated cold air intake.
29. Flying controls locking lever.
30. Oil cooler shutter control.
31. Rudder pedals.
32. V.H.F. transmitter-receiver control unit.
59. Rudder pedal adjustment release levers.

(© Crown Copyright)

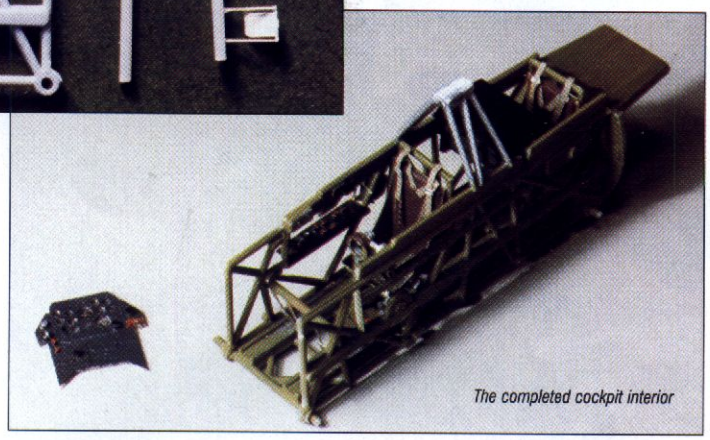


Technical Data

Manufacturer: Ocidental Replicas
Scale: 1/48th **Price:** £13.95
Type: Injection Moulded Plastic
Parts:Plastic 70, Clear 7
Decal Options: 1 (Portugal)
Manufacturer: Ocidental Replicas, Plasticum Lda. Lugar da Estção, 4470 Maia Portugal.
UK Importer: Pocketbond Ltd. PO Box 80, Welwyn, Herts. AL 6 0ND
Tel 01707 391509



The cockpit sides were converted as well with scraps of plastic card and rod used to produce the older style gear and flap controls (around the trim wheels on the left side) plus the flare gun and cartridge stowage on the right along with the map case and compass. Spade grip 'sticks were made from Contrail rod and tubing (front 'stick shown, the rear one was simpler for it didn't have the gun and bomb controls). The rudder pedals were replaced with etched brass items from a Reheat generic USAAF/USN set as were the seats, while seat harnesses came from the RAF set



The completed cockpit interior

Externally the Harvard II model required the addition of a pair of instrument venturis (just above and to the rear of the exhaust) and the creation of plain wheel discs, simply achieved by reversing the spoked inserts so their flat insides showed

leaves a deep channel which was filled with Tipp-ex) and with hindsight I wish I'd made a bit more of an effort with the wing installation, adding a packing piece of thin plastic card between the wing centre section and the underside of the fuselage to remove a tiny step.

There were also a couple of very slight shrink marks in the underside of the wing tips (they're moulded in one piece with the upper wing panels) but they're so slight they didn't show up until the final glossy finish was applied. Watch out also for the mould line around the outer front of the wheel wells (where they project forward of the leading edge line) for this also looks a bit clumsy and needs to be scraped and sanded down.

Other optional refinements are to open out the end of the huge exhaust pipe with a 1/8in. drill, scrape down the exposed edge of the cowling to a more realistic thickness, and add some thin plastic card to the inner sides of the airscoops to the cowling's left and bottom. Just for the record, I haven't figured out either why the modeller is provided with three mainwheels, one pair with circumferential treads and a third 'odd man out' with a chequered tread!

(During Ocidental's research for this kit, they discovered that Portuguese A.F. examples never had a matching set of tyres, so they gave you the option to replicate this in the kit! - Ed)

I was impressed by the dropped flaps, flattened tyres and the neat touches like the separate aileron mass balances and exceptionally positive fitting of the undercarriage legs. The five-piece cockpit canopy is beautifully clear, which is fortunate as the elements are too thick to be convincingly slid one over the other. If the modeller is determined to show an opened canopy I'd suggest that the aftermarket canopy intended for the Monogram kit will provide the easiest fix.

Colour and markings

Photos in Roger Freeman's 'The Royal Air Force of World War Two in Colour' showed Harvards of No 20 SFTS in Rhodesia in January 1943, and I happily chose one of these aircraft, made more distinctive by its natural metal finish and large identification numbers.

After giving the model a coat of spray acrylic primer I started by spraying on the anti-dazzle panel from Humbrol matt black and the yellow parts of the wings with Xtracolor X11 (RAF Trainer Yellow). These were masked off and the whole model sprayed with Humbrol Metalcote Polished Aluminium before being gently buffed up. These SA Harvards have an obvious polished bare metal finish, so those who have the ability to produce a convincing 'panelled' appearance could produce a superb model in this scheme.

Roundels and serials for the model came from the Xtradecal generic RAF sheets X021-48, X031-48 and X028-48, apart from the yellow-outlined Type A fuselage roundels which came from the scrap box. The large red identification numbers were brush painted onto Microscale clear decal sheet with Tamiya acrylics, a combination that worked very well when they were applied. The largest Modeldecal code letters I could find were used on the underside of the wings, they're a tad too small but are acceptable.

Matt varnish was sprayed onto the yellow parts of the wings, but apart from that the model was left in its natural state.

All the kit's various radio aerials were left off and their mounting holes filled. Roundels, flashes and codes came from the Xtradecal generic sets, while the individual numbers were painted onto clear decal film using Tamiya acrylic paint. The additional framing bars on the canopy were achieved simply by 'adjusting' the framing masks to suit.

Summary

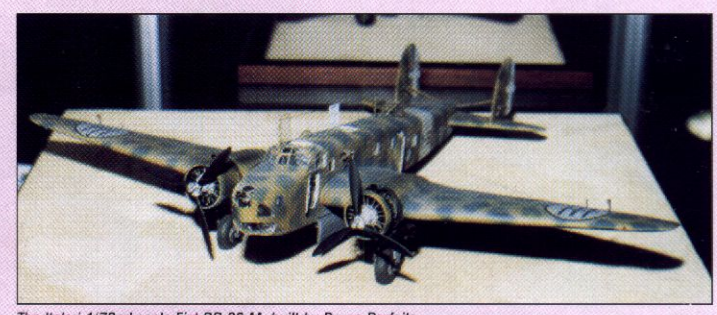
An excellent little kit, very realistically priced and apparently very accurate. The T-6/Harvard appeared with so many different modifications (exhaust pipe, tailwheel, wheel centres, various intakes, even the coaming over the rear instrument panel) it's impossible to be pedantic, but it's unmistakably a T-6. My model had scale dimensions of length (tail up in flying attitude and including prop boss, but no spinner) of 28ft 9in and span of 42 ft against quoted dimensions of 29ft 6in and 42 ft. The range of alternative finishes seems to be inexhaustible (I wonder who'll be first with a white painted model with six 'meatballs'?) and Ocidental deserve all the praise they will undoubtedly get for taking the courageous step from sub-contractor (it appears they are responsible for the actual tooling of some recent Airfix kits) into a manufacturer in their own right. Recommended to all.

My thanks to Pocketbond Ltd for the review sample.

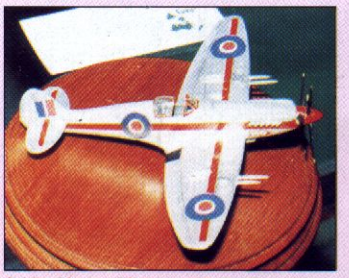
David Batt

Show Report: IPMS ITALY National Championships '98

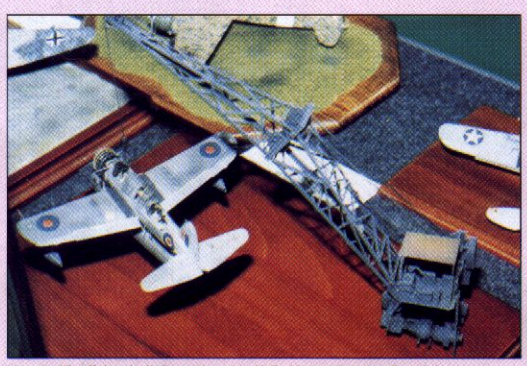
View of the IPMS-Milano ANR collection



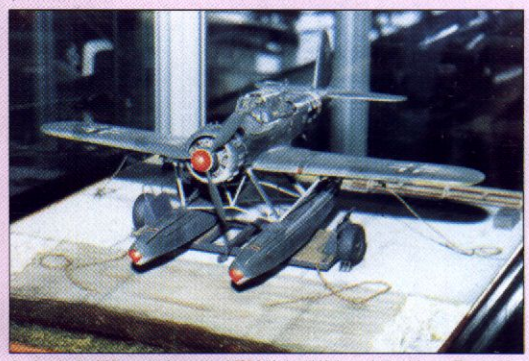
The Italeri 1/72nd scale Fiat BR 20 M built by Bruno Perfeito



Spitfire F.21 in 1/72nd from the Aeroteam kit by Mr Carlo Cervi of IPMS Alessandria



Vought Kingfisher built from the old Airfix kit by Nicholas Poncini

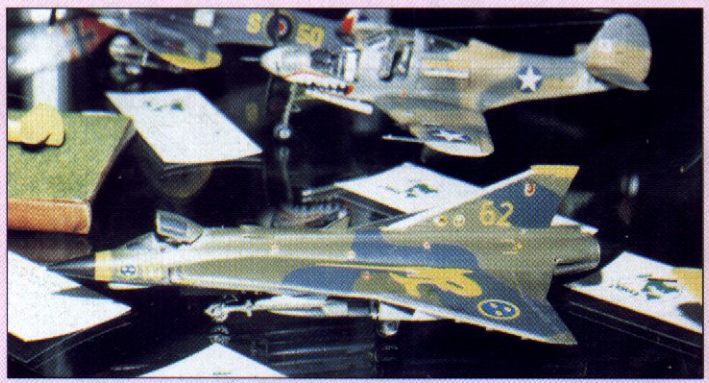


An Arado Ar 195 made from the MPM kit in 1/48th scale by Marco Tavecchia

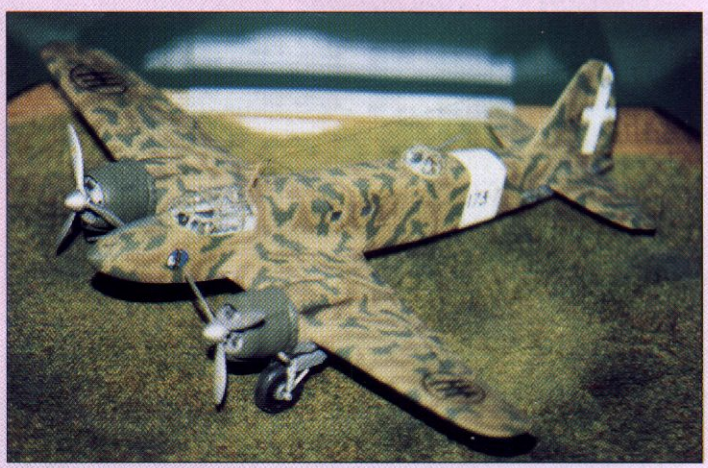
The Macchi C.200 1/72nd from the RCR kit by Marsagua Giuseppe

The Academy Hurricane converted to a Sea Hurricane by Daniele Coloris

IPMS-Milano stand. Partial view of ANR (Aeronautica Nationale Republicana) collection in 1/72nd scale



Saab Draken in 1/72nd from the Hasegawa kit built by Massimo Bianchi

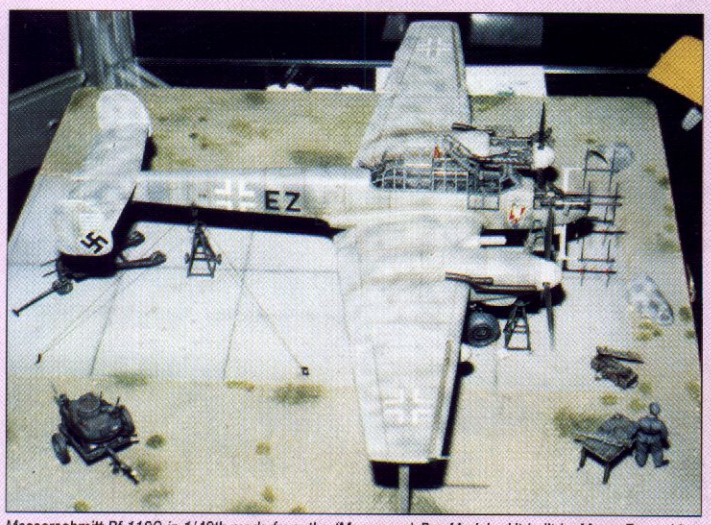


Fiat CR.25 in 1/72nd from the RCR kit by Giuseppe Verde

The Academy 1/72nd Boeing B-29 built by Franco Cieracá

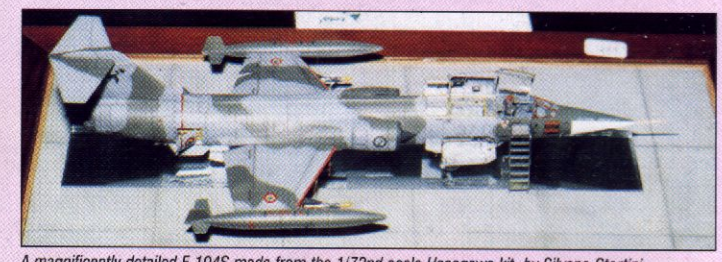
The TSR.2 in 1/72nd scale by Toad Resin and built by Carlo Cervi

by Marino De Bortoli (IPMS-Milano)

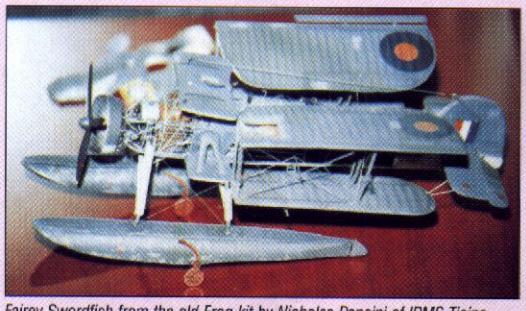


Messerschmitt Bf 110G in 1/48th made from the (Monogram) Pro-Modeler kit built by Marco Tavecchia

The Lavochin (1/48th scale) collection on the IPMS-Milano stand.

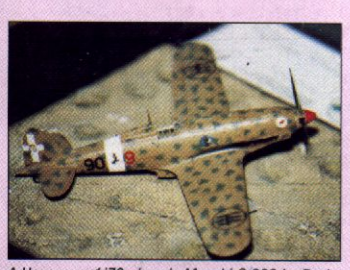


A magnificently detailed F-104S made from the 1/72nd scale Hasegawa kit by Silvano Stortini

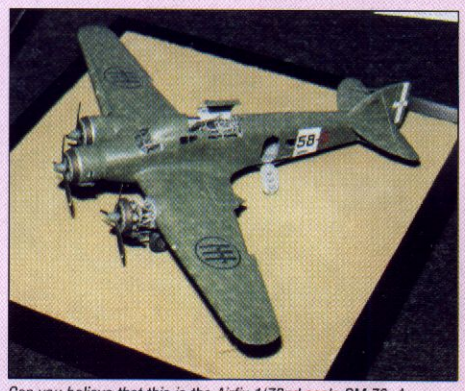


Fairey Swordfish from the old Frog kit by Nicholas Poncini of IPMS-Ticino

SM.79 in 1/48th scale from the E.P Original model built by Italo Di Milia



A Hasegawa 1/72nd scale Macchi C.202 by Paolo Barbaro



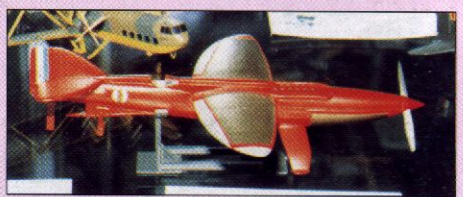
Can you believe that this is the Airfix 1/72nd scale SM.79. A beautiful model by Silvano Stortini

An Airbus A-390 in 1/144th from the Revell kit, built by Claudio Canton of IPMS-Vigevano

Fiat G.55 in 1/50th scale from the Smer kit by Mauro Perego

A Douglas C-54A-DC modified from a DC-6 by Mr Albino Benedeito.

The Fiat CR.32 in 1/48th scale from Classic Airframes kit built by Maurizio Di Terlizzi



The Piaggio Pc.7 in 1/48th from the Noix Model kit by Marino De Bortoli

The specially marked 1/72nd scale F-104S was built from the Esci kit by Carlo Cervi

The Boeing B.737 in 1/144th scale from the Skyline Models kit by Claudio Canton of IPMS Vigevano

A Piaggio P.50 in 1/72nd scale, scratch built by Mr Albino Garavagli

Eagle's Wings

N°.1, by Mike Hyrons

Messerschmitt Bf 110G-2

Welcome to this, the first part in an on-going series of articles on Luftwaffe aircraft of the 1935 to 1945 period. Contributions to this series of features are planned from myself, Kenneth Clapham and others. Mike Hyrons kicks the series off though with a look at the Messerschmitt Bf 110G-2 by Revell-Monogram.

● Next Installment: Bf 109G-12 (Falcon) by Kenneth Clapham.

3. The instruction booklet

The Kit

This kit comes in a rather flimsy box, sealed in cellophane, with a superbly detailed painting of a Messerschmitt Bf 110G-2 by Dennis Davison on the lid. This new 1/48th scale model kit is a follow on from their excellent Bf 110G-4, but this time you can only build one aircraft type.

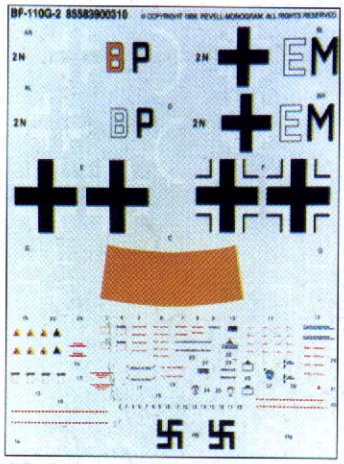
The kit is made up from 119 light grey injection moulded parts and 14 clear plastic parts. The product is completed with a comprehensive instruction sheet and silk-screen printed decals. The kit features options for open or closed cockpit canopies, underwing stores including drop tanks, WGr.21 rocket launchers and Rustatz MI (MG.151/20) gun pod on the underside fuselage centre line. The modeller also has the option to add armour plate to the fuselage just forward of the cockpit windscreen. The instructions give full size templates for this alteration. All the components are contained on five sprue frames, four for the plastic and the other for the clear. The grey plastic parts are sealed in a plastic bag, but unfortunately, the clear parts are left loose in the box.

The kit in general has excellent moulded surface detail with very fine engraved panel lines, rivets and good reproduction of the fabric covered control surfaces. The interior fuselage cockpit sides and wheel wells have very good raised detail. Flash and seam lines were evident on most parts, and the cockpit canopies have fine raised panel lines.

Technical Data

Kit:	Messerschmitt Bf 110G-2
Manufacturer:	Revell - Monogram
Scale:	1/48th **Price:** £22.95
Type:	Injected Moulded Plastic
Parts:	Plastic 119, Clear 14
Decal Option:	2
Manufacturer:	Revell-Monogram Inc., 8601 Waukegan Road, Morton Grove, Illinois 60053, USA.

1. The box art



4. The content and quality of the decal sheet is quite superb

Instructions

The instructions consists of an American A4 sized booklet in English and French that opens out to reveal sixteen exploded view assembly sections (some assembly sections are sub divided), plus one for painting and decals, and one for common stencil placement. A brief history and caution section are also included as part of the instructions but no technical data section is provided.

RLM numbers and colour descriptions are included. The manufacturer recommends ProModeler or Revell-Monogram paints, but no descriptions of manufacturer paint codes are listed. RLM numbers for the basic camouflage colours are RLM 74, 75 and 76, (Graugrün, Grauviolet and Lichtblau) respectively. Detailed painting instructions are called out throughout construction.

Although not the best drawn, the illustrations in the instruction booklet are adequate and clear to follow.

The construction of this kit was comparatively straightforward and the overall fit of parts was very good once the flash and unwanted seam lines were removed.

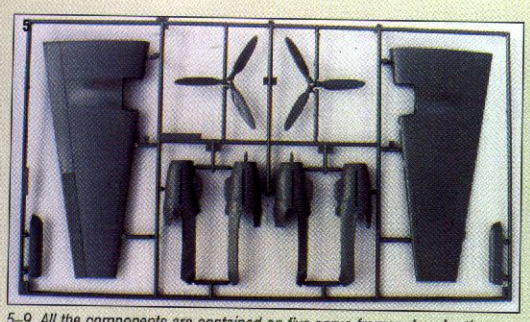
Cockpit

The cockpit comes complete with sides and floor, instrument panel with raised detail, including dial increments and internal dial detail, seat, rudder pedals, control column, pilot's armour plate and rear bulkhead frame. The cockpit sides and floor have side consoles, switches, throttle quadrant, trim tab wheel, radio equipment, aluminium boxes, feed chutes and 20mm cannon breeches all moulded onto them. Note that the use of RLM 66 for the entire cockpit interior is quite correct for a late series Bf 110.

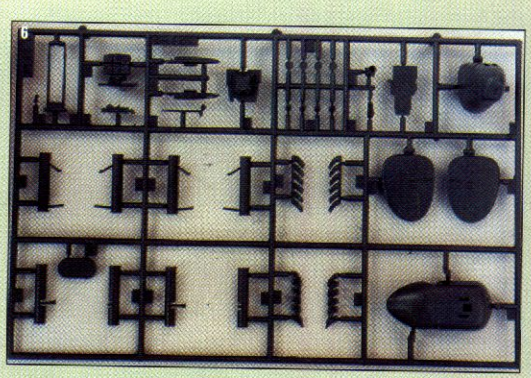
Assembly started by air brushing the cockpit interiors with Schwarzgrau. I use Tamiya XF63 German Grey and once dry, a wash of thinned paint, (Schwarzgrau plus a spot of black and thinners) was brushed into and around all the corners, frames, control

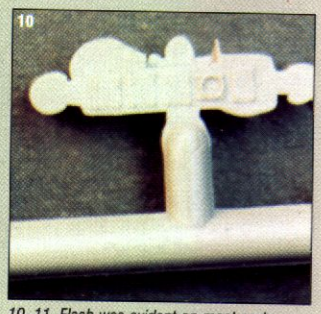
1/48th SCALE

2. The contents of the kit

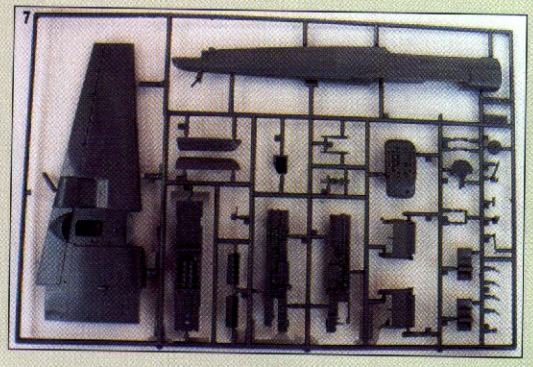


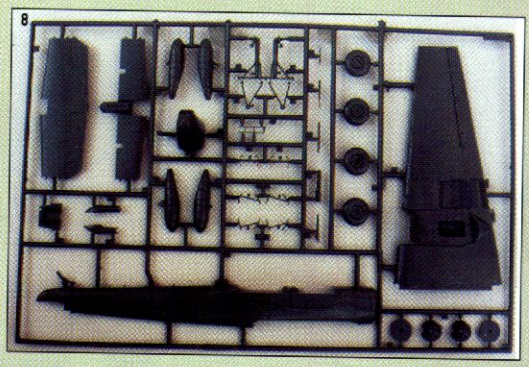
5–9. All the components are contained on five sprue frames, four for the plastic and one for the clear

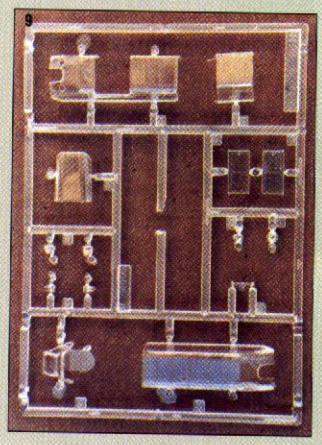


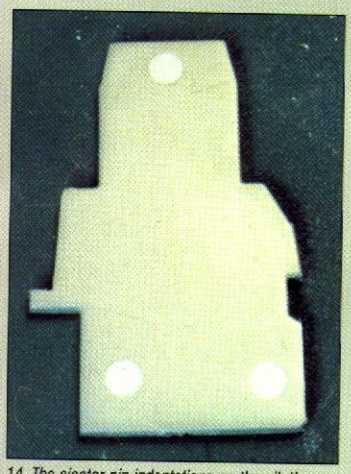


10–11. Flash was evident on most parts, especially on the finely moulded smaller parts

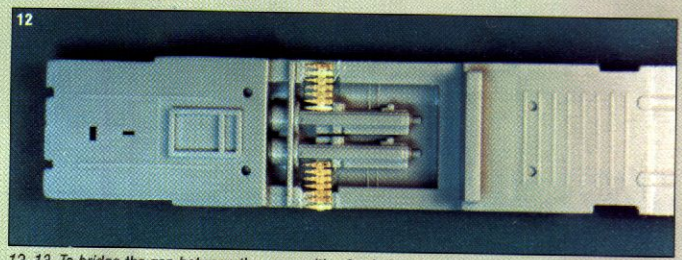




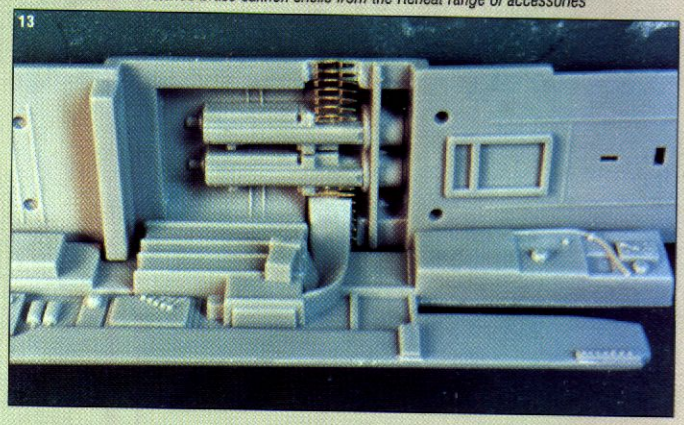


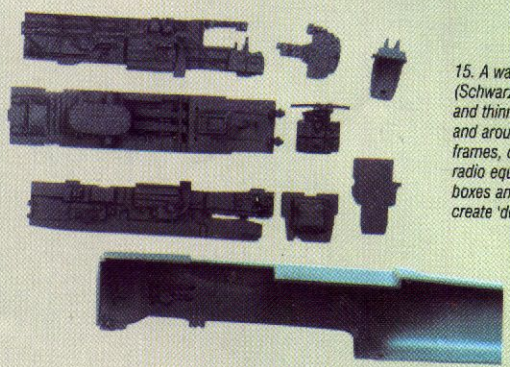


14. The ejector pin indentations on the pilot's armour plate were filled with Humbrol filler then sanded smooth before painting

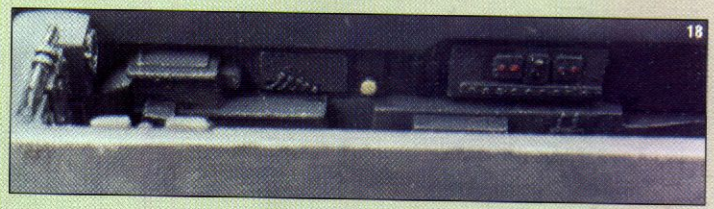


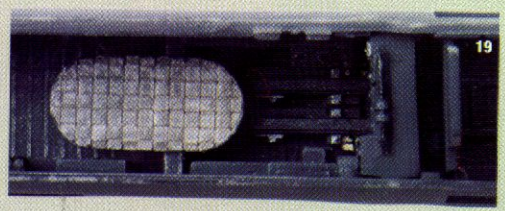
12–13. To bridge the gap between the ammunition feed chutes and cannon breeches, in the cockpit floor, I added 20mm etched brass cannon shells from the Reheat range of accessories

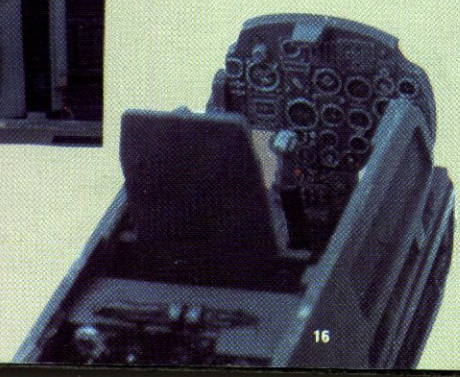




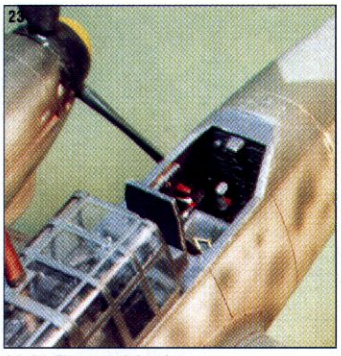
15. A wash of thinned paint (Schwarzgrau, plus a spot of black and thinners), was brushed into and around all the corners, frames, control boxes, switches, radio equipment, ammunition boxes and 20mm cannons to create 'depth'



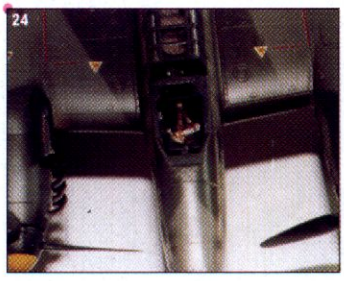




16–19. The completed cockpit. The quality of the raised detail speaks for itself



23–24. The cockpit interior



boxes, switches, radio equipment, ammunition boxes and 20mm cannon to give 'depth'. As soon as this was dry the whole area was dry brushed using the original base colour (XF63). The moment this was dry a second application was used on the raised detail. This time a slightly lighter mix of Schwarzgrau was applied. Finally the interior switches, boxes, throttle quadrant, levers, etc. can be painted matt black or an appropriate colour.

To bridge the gap between the ammunition feed chutes and cannon breeches, in the cockpit floor, I added 20mm etched brass cannon shells from the Reheat range of accessories, (RH071). I also added from the above set an etched seat-belt harness set to the pilot's seat and a ring sight to the rear-facing twin machine guns, this increased the attractiveness of the cockpit. The pilot's seat and armour plate (parts 22 and 202) were left out until final assembly to aid masking and painting.

The instrument panel was painted Schwarzgrau, then the bezels of the instruments and dial faces were painted satin black. Dry brushing was used to highlight the raised detail on the panel with white enamel being used on all the dial faces etc. To imitate glass I added a drop of gloss varnish to each face. The cockpit assembly was fitted to the right fuselage half and then the two halves cemented together. The ventral antenna wire mounting stubs on the under side of the fuselage were removed and filler applied along the seam. Once dry it was filed to the contours of the fuselage. The nose section (part 206) was found to be slightly oversized and of a poor fit. Masking tape was run round the nose to fuselage mounting lip to overcome this problem and achieve a tight fit. The tape was then trimmed and the nose glued in place with superglue. I decided against fitting the added armour plate mainly because I didn't have any 2 thou (0.002" - 0.05mm) plasticard.

Engine Nacelles

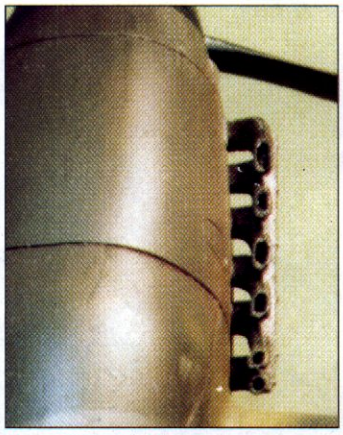
The engine nacelles assembled without fuss but the oil coolers, once fitted to the engine nacelles, required some filler fore and aft. A series of small holes was drilled in the strengthening triangular fillet plates on the engine nacelles and on the wheel well housing bulkhead to create a more realistic effect of the drilled fillets within these areas. This area was then airbrushed with RLM 02 from the AeroMaster Acrylic range and dry brushed using Humbrol 78 (Interior Green) to highlight the raised details, followed by detailed painting of the hydraulic and fuel pipes etc.

I used the Aircraft Sketchpad drawings by Steve Benstead in Volume 3 Issue 1 (January 1997) of SAMI to provide the necessary reference for any rework and additional detail work throughout this project.

The completed engine nacelles were fitted to the lower wing assemblies and glued with a small drop of superglue at the rear centre line of the nacelle and to the centre of the fairing on the flap. The upper wing assemblies were then glued to the lowers and left to set. Once set the engine nacelles were free to be pushed, pulled and pressed into the correct position for gluing. This ensured a good all round fit of the nacelles to wing assemblies.

Wings & Tail

The wing and tail assemblies were now fitted to the completed fuselage, the tail requiring some filler around the upper joint. The transparent navigation lamps (parts 96) were glued to the wings using superglue, and when dry they were filed to the shape of the wing tip profile, buffed using nylon wool and then finished by polishing with plastic liquid polish to restore transparency. All of this allowed these lamps to look part of the wings, and not just a piece of clear plastic stuck onto the ends! The port lamp was painted Humbrol clear red (1321) and the starboard lamp painted Tamiya clear blue (X23).



27. To create a realistic look on the model, the exhaust manifold stacks were drilled using a fine drill

Following the instructions, Step 10 Underside Detail - 'C Optional', the ventral antenna wire mounting stubs on the underside of the fuselage were replaced with brass rod 0.5mm in diameter and 2mm in length. Holes of 0.45mm diameter were drilled into the underside of the fuselage and then the brass rods were pressed into the holes, leaving 1.5mm of the rod projecting from the surface. The antenna lead was made from fine copper wire and glued in place with superglue. Once set, the copper wire was bent round a 1.5mm drill bit and pulled onto the stubs, then secured with superglue.

To create a realistic look on the model aircraft, the exhaust manifold stacks, the MG 151 cannon tips and machine guns were drilled using a fine drill. The holes were then painted matt black, then the surrounding area was dry brushed using a mix of a light greyish coloured paint.

The propeller spinner and back plates would appear to be slightly undersized, and once assembled, they were left off until final assembly.

Preparing to Paint

Once complete the joints around the model were rubbed down using fine wet and dry rubbing paper (1200 and 1500), then spot primed to check for imperfections.

Before painting the whole aircraft was once again rubbed down using fine nylon wool and 1500 wet'n'dry. The model was then washed and the recessed panel lines cleaned out using a fine nylon toothbrush and this was followed by removing all the excess water and any remaining oil or grime with a sterile alcohol surface wipe.

Painting

The kit can be constructed only as one version, but with two marking choices. These are, 2N+PB and 2N+EM. No squadron or base details are included on the instructions for these options, although it is most likely that they are from 6./ZG 76 based in Germany in 1944/5.

The instructions list RLM numbers for the camouflage as RLM 04 Flat Yellow (Gelb), RLM 23 Insignia Red (Rot), RLM 70 Black Green (Schwarzgrau), RLM 74 Gray Green (Graugrün), RLM 75 Gunship Grey (Grauviolet) and RLM 76 Light Blue (Lichtblau). I opted for the first option using AeroMaster Warbird Acrylic colours RLM 04 (1101) and RLM 76 (1027) and Gunze Sangyo Aqueous Hobby colours RLM 70 (H65), RLM 74 (H68) and RLM 75 (H69). Gunze Sangyo's RLM 74 Dark Gray (Gray Green) was lacking a tinge of green, and I therefore used a mixture of RLM 74 (Gray Green) and RLM 70 (Black Green) at a ratio of 4:1 to obtain the correct hue.

Painting started by airbrushing the whole aircraft with Gunze Sangyo RLM 02 Grey, followed by painting the tail band RLM 04 freehand. This pre-painted area was now masked and the undersurface colour applied. When dry the whole area was masked to give soft demarcation lines once the upper surface colours were applied. To create a soft straight demarcation line, take a length of 1/2"

Information File No.1

RLM and RLM colours

Many of you will have seen the expression 'RLM' used in conjunction with German WWII colours. RLM is an abbreviation of *Reichsluftfahrtministerium* and this was the German Aviation Ministry.

To be truthful the only true RLM coded colours are 'RLM 00', 'RLM 01' and 'RLM 02'. These being a protective clear varnish, silver and a grey-green interior colour respectively.

Although all other colours are often prefixed 'RLM' they were never officially identified in this manner. The colours were simply identified by a numeric code and the colours name e.g. '66 Schwarzgrau'. Today, however, it has become common practice to identify all WWII era German colours by prefixing the colours name and serial with 'RLM', therefore you always see 'RLM 66 Schwarzgrau'.

The whole subject of German colours is a minefield, and the discussions about it will continue for years. Currently there is a feeling within certain groups of aviation historians, that the late war greens have been incorrectly identified. Therefore the colour often identified as 'RLM 82 Dunkelgrün' is now believed to be RLM 83, which was originally 'Lichtgrün'. To confuse it further RLM 83 Lichtgrün is now RLM 82! This has caused all sorts of confusion in regard to kit manufacturers' instructions, as some retain the 'old' system, while others have already embraced the 'new' system. For the record this is the series of colours we will be trying to stick to with this series:

RLM 00 Wasserhell (Water Bright -varnish)
RLM 01 Silber (Silver)
RLM 02 Grau (Grey-Green)
RLM 04 Gelb (Yellow)
RLM 05 Lasur (Cream)
RLM 21 Weiss (White)
RLM 22 Schwarz (Black)
RLM 23 Rot (Red)
RLM 24 Blau (Blue)
RLM 25 Grün (Green)
RLM 26 Braun (Brown)
RLM 27 Gelb (Yellow)
RLM 41 Grau (Grey)
RLM 61 Dunkelbraun (Dark Brown)
RLM 62 Grün (Green)
RLM 63 Lichtgrau (Light Grey)
RLM 64 Lichtblau (Light Blue)*
RLM 65 Hellblau (Bright Blue)
RLM 66 Schwarzgrau (Black-Grey)
RLM 67 Dunkelolivgrün (Dark Olive Green)*
RLM 68 Hellolivgrün (Bright Olive Green)*
RLM 69 Lichtlohfarbe (Light Tan)*
RLM 70 Schwartzgrün (Black-Green)
RLM 71 Dunkelgrün (Dark Green)
RLM 72 Grün (Green)
RLM 73 Grün (Green)
RLM 74 Graugrün (Grey-Green)
RLM 75 Grauviolett (Grey-Violet)
RLM 76 Lichtblau (Light Blue)
RLM 77 Hellgrau (Bright Grey)
RLM 78 Hellblau (Bright Blue)
RLM 79 Sandgelb (Sand Yellow)
RLM 80 Olivgrün (Olive Green)
RLM 81 Braunviolett (Brown-Violet)
RLM 82 Dunkelgrün (Dark Green)
RLM 83 Hellgrün (Bright Green)
RLM 84 Graublau (Grey-Blue)
RLM 99 Gelb/Grün (Yellow-Green)

* All marked thus were used on export aircraft only

Further Notes

RLM 63: There is another RLM 63 often listed as 'Graugrau'. But as this is similar to RLM 02 Grau (Grey-Green), we will be utilising that colour throughout this series.

RLM 81: There is also a shade of RLM 81 Brunviolett that does not match the official colour. This is often called 'field applied' and is sometimes prefixed 'RLM 81a' by some manufacturers and authors.

RLM 84: This is a relatively new colour, that came about as a belief that a 'German Sky' colour, similar to RAF Sky was used. This ties in with some late-war reports of this colour on aircraft captured, but there is no official code or specification that we know of to cover it. 'RLM 84' seems to have been accepted for this colour in the modelling field though.

Graublau: There are also three other shades of 'Graublau' listed as being seen late-war. These are a blue, sky (see above) and grey shade and can be seen within the excellent 'The Official Monogram Painting Guide to German Aircraft 1935-1945' title, which although long out of print, is a real mine of information for all things concerning German colour and markings

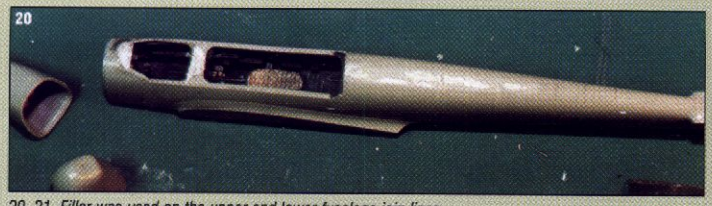
RLM 79; This is a Sand Yellow colour, but the Luftwaffe in North Africa often applied Italian colours, as their own stocks of suitable colours took a time to arrive at the front. This resulted in different colours being applied to those 'officially' listed. Some manufacturers list the different version of RLM 79 as 'RLM 79a'. The real colour was 'Italian Sand Yellow'.

RLM 80: This was often 'Italian Mottle Green'

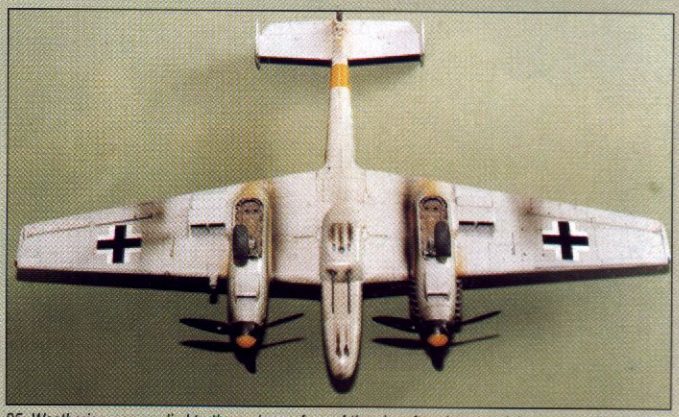
RLM 78: This was often 'Italian Sky Grey'

Please note that the above listing and comments are not open to discussion, and are offered as a guide to accompany this series only. Further research into this subject is recommended to all modellers, but the subject is vast and complex and so we felt that less experienced modellers would be helped by the compilation of this chart. Please do not write to the Editor about any points raised above.

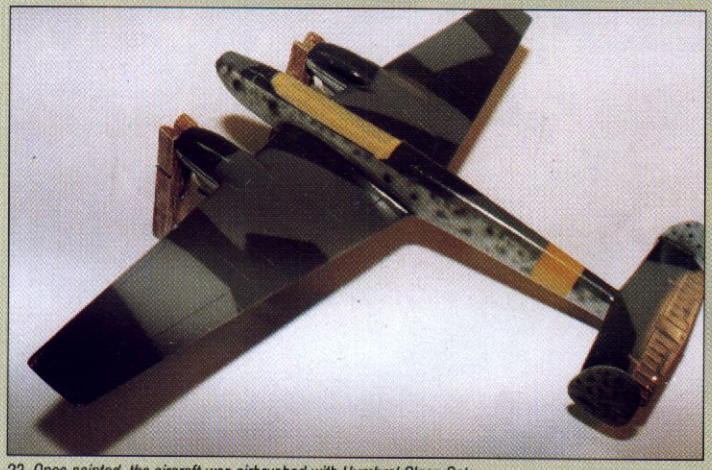
Thanks
R.A. Franks, Editor



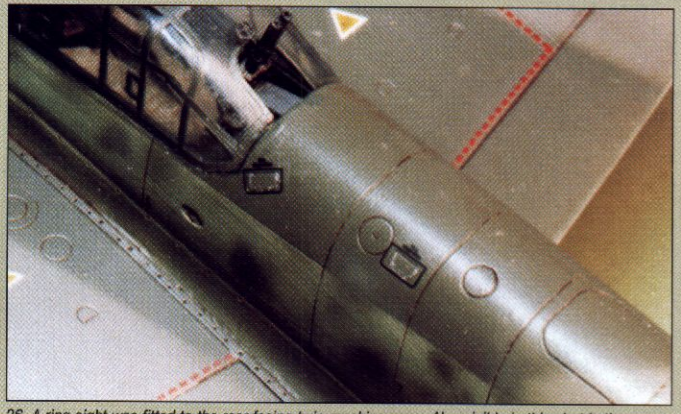
20–21. Filler was used on the upper and lower fuselage join lines



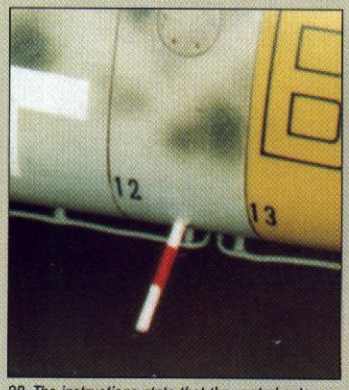
25. Weathering was applied to the under surface of the aircraft, exhaust staining, ammunition staining, soiling streaks from the undercarriage units, oil streaks from the engines. The clean light blue undersurface was weathered out to light dirty grey



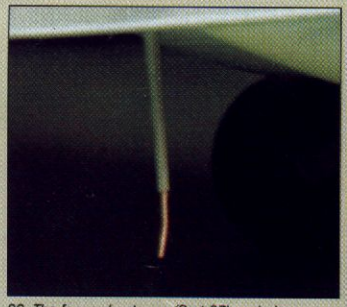
22. Once painted, the aircraft was airbrushed with Humbrol Gloss Cote



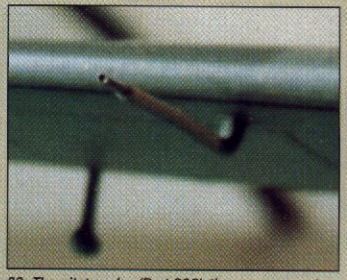
26. A ring sight was fitted to the rear-facing twin machine guns. Also visible in this shot is the weathering on the fuselage hand holds. This was applied with a silver coloured pen



28. The instructions state that the ventral antenna (Part 36) should be painted matt black. My references suggest RLM 21 (white) and RLM 23 (red)

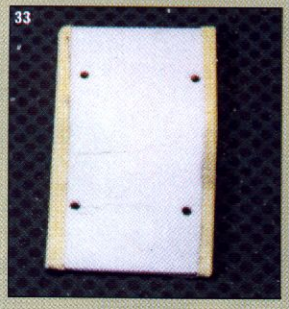


29. The forward antenna (Part 37) end piece was removed and replaced with copper wire

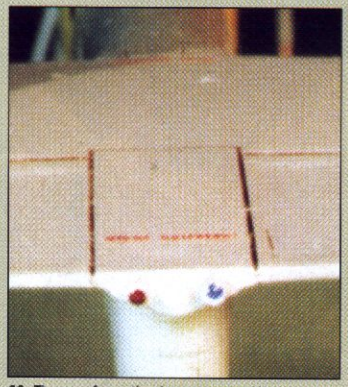


30. The pitot probe (Part 203) tip was removed and replaced with a length of Microlance tube, 0.6mm in diameter

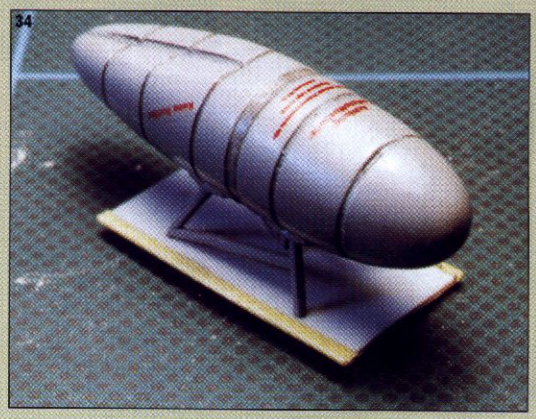
31. The tyre sidewalls were shaded darker than the basic 'tyre black' (AeroMaster) to give a more realistic effect. This was achieved by using a compass cutter to make a circular template to expose only the sidewall, followed by airbrushing the darker shade

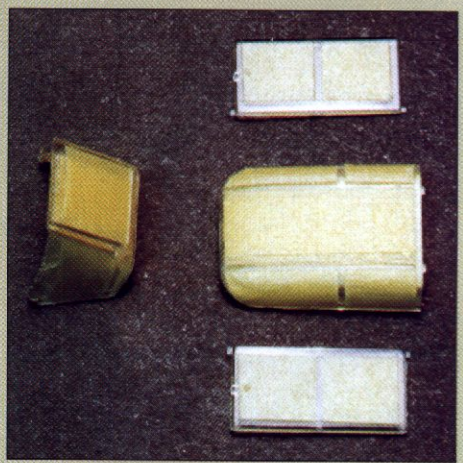


33–34. A plasticard template was made to assemble the drop tank supports to tank. This ensured the correct alignment and placement when secured to the underside of the wings

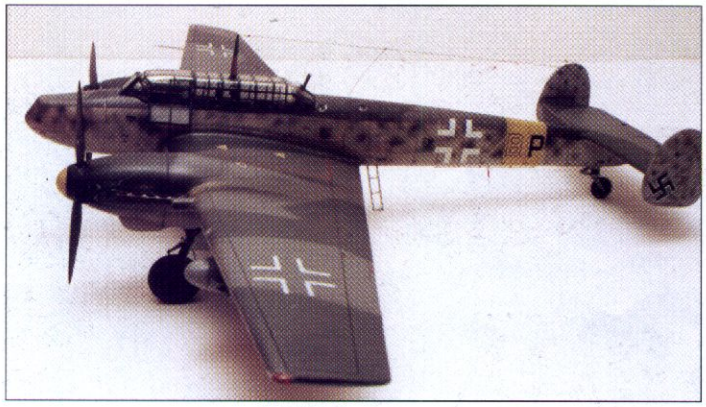


32. The rear formation lamps on the kit were removed and replaced with plastic discs made from Waldrons precision punch and die set. A small indentation was drilled in each side and then filled with paint (clear red, silver/white and clear blue). Once dry a small drop of superglue was applied to each to represent the glass lenses

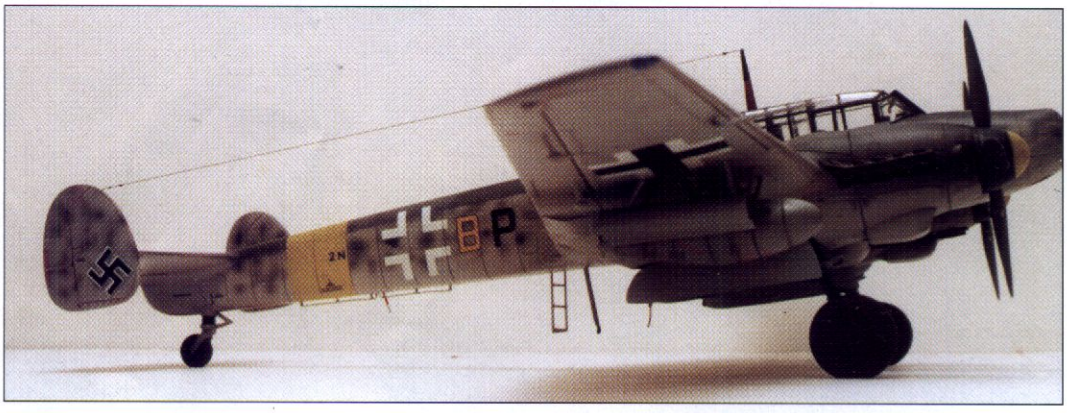




35. The cockpit canopies were masked before painting. RLM 66 was airbrushed first, then followed by RLM 74



commercial masking tape and fold it in half, sticky side out. Remove some of the stickiness from one side of the masking tape by drawing it across the edge of your workbench a couple of times. Apply the folded tape to the aircraft's demarcation lines (along the fuselage sides, wing and tail plane leading edges and engine nacelle sides) with the good sticky side, then allow the other side of the tape to roll round, up and away from the surface. Airbrush at right angles to the surface area in the normal fashion. I usually increase the air pressure on my compressor to between 30p.s.i. and 40p.s.i and apply the paint in several thin layers for this type of application. Careful masking and



air brushing gave the splinter camouflage pattern a fine soft feathered edge.

Humbrol Gloss Cote, thinned with cellulose thinners was sprayed onto the overall surface prior to the decals being applied and a coat of Xtracolor semi-gloss clear varnish was sprayed on after the decals were set. A wash of dark brown ink was run into the panel lines on the upper surface and grey on the under surfaces to accentuate these details once everything was fully dry.

Decals

The content and detail of the decal sheet is quite superb. I cut out the decals that were required for my chosen aircraft and put the others aside. The decals were applied to the model's gloss surface using MicroSet and Sol solutions. MicroSet will improve the adhesiveness of the decal to the model and MicroSol will soften the decal and make it conform to the shape of the model and allow the decals to adhere fully around, and into, panel lines and rivet detail. There was no adverse reaction to these solutions from the decals.

Being silk-screen printed the decals seem slightly thicker that normal, although they have excellent colour density, are not transparent and had little excess carrier film around the images. These are probably the best kit decals I have used, albeit, that the swastikas would not line-up properly and were subsequently replaced by AeroMasters swastikas from sheet 48-025.

Decal Rating = 9/10

Accuracy

Jane's Encyclopedia of Aviation lists the Messerschmitt Bf110G-4C with a wing span of 16.26m (53 ft 4 in) and a length of 13.0m (42 ft 10 in), while on the other hand, going by the dimensions in the Putnam title 'German Aircraft of the Second World War' the type (C/D) had a wing span of 16.28m (53 ft 43/4 in) and a length of 12.10m (39 ft 81/2 in).

The dimensions of this model are listed on the box lid and state a wing span of 13 1/2in (342mm) and a length of 9 7/8in (250mm). The model therefore scales out to wing span 54 ft (16.46m) and length 39 ft 6 in (12.04m) approximately. By converting to metric measurements, wing span is 16.416m (53 ft 10 5/16in) and length 12.00m (39 ft 4 1/2in). Either way, I would consider the discrepancies in dimensions of this kit are not extreme or excessive, thus making a convincing scale replica that looks the part

Note: The term 'Bf 110G-4c' is not an official Luftwaffe term. This is used in modern reference titles to identify the radar fit e.g. FuG 220 Lichtenstein SN2b on a G-4 is sometimes listed as a 'G-4b'.

Please also note that the mass of mods and fitment codes often shown in recent titles on Luftwaffe aircraft, such as Bf 110G-4/R3/M1 are also incorrect. The fitment of such equipment was not identified in Luftwaffe records, other than as a listed modification etc (as on the 'Mod Plate' and in the Form 700 of an RAF type). The Luftwaffe would have referred to the type simply as the Bf 110G-4, no matter how many 'R' or 'M' sets were added (Editor)

Conclusion

Revell-Monogram have promoted themselves to the premier division with the quality of this kit and have certainly taken heed of some constructive criticism about their previous releases. Although very good, further improvements could be made by careful use of the moulds during production, that would hopefully result in the removal of flash and seam lines that are prominent in this kit.

I personally feel this kit is over-priced, when compared with other kits of this scale and physical size. Despite this criticism though I will still buy a couple of these kits as well as their new Messerschmitt Me 410 to add to my collection.

Recommendation

This kit is not complicated to construct and I would recommend it to most skill levels, although the complete novice or beginner may require some additional guidance and help. Care should be taken when removing the parts from the sprue gates and for me, the removal of the flash and seam lines turned out to be a long and tedious task, especially on the smaller parts.

A careful study of the instructions and a little corrective work will ensure a good scale replica of this aircraft. Remember, time and patience make all the difference between a standard model and a great looking one.

Mike Hyrons

Messerschmitt Bf 110G-2

Voodoo (F-101)

A Conversion Experience

by Steven J. Corvi

History

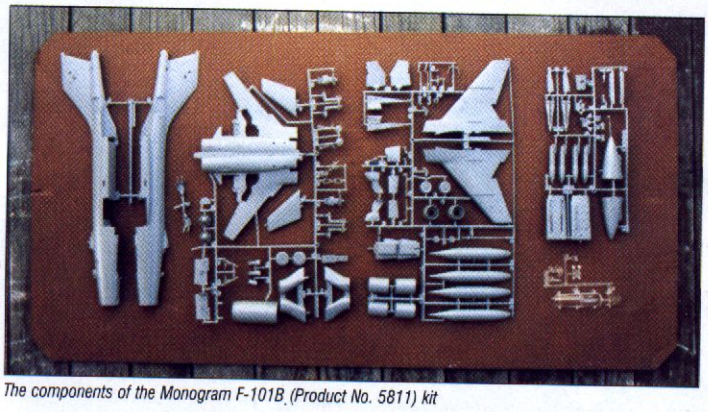
The F-101A came from the bygone era of the Cold War, speed and altitude records, MC2 pressure suits, BBVR (Before Beyond Visual Range was a more exacting science), and of course an environment where the pure interceptor ruled supreme. Conceived from the earlier XF-88 McDonnell fighter project, this aircraft was to remedy the deficiencies in long range fighter escort that emerged during the Korean War with the F-84 and F-86.

Originally designated for Strategic Air Command as a fighter escort for long range nuclear strike missions, the aircraft was never to serve this purpose. It did however later serve in Europe as a fighter-interceptor in Tactical Air Command, a NATO front line fighter, in the early sixties.

The pedigree was from the 'Century Series' of American fighters of the mid to late-1950s. The F-101A was the most powerful of the Century Series and had the best rate of climb. Powered by twin J57-P-13 Pratt and Whitney (the early F-101A's) turbojets, which produced 15,000lb.s.t. with afterburner. Few fighters of its day could match the Voodoo's pure power. The aircraft was unique in many ways; its size alone was daunting for this aircraft was bigger than most fighters at that time. The Voodoo was plagued with early technical problems such as pitch-up stall, which occurred in supersonic flight (especially when the pilot attempted a Split-S) and a limited stress airframe (6.33 G's). McDonnell corporation had learned quite a bit from these experiences and the lineage can be seen in later aircraft especially the F-4 Phantom along with the F3H Demon. The twin engine Mach 2 plus fighter was to become the hallmark of American fighter design for the next twenty years.

The F-101A never saw combat as a fighter variant, but had seen action in Southeast Asia (1964-1973) as a photo-reconnaissance aircraft (RF-101A/C). The speed and elegance of this fighter can only be matched by the later F-104 Starfighter (the aircraft that would break the speed record set by the F-101A in 1957), a forgotten aircraft that seems to draw little attention. The aircraft served as a test bed at Edwards Air Force base during 1958-1961, where it provided some key test pilots that would later become astronauts in the NASA (National Aeronautics & Space Administration) program. This was the subject (inspired by Tom Wolfe's The Right Stuff) I chose to build in 1/48 scale; Aircraft 55-2430 which was assigned to the Air Force Flight Test Centre at Edwards Air Force base in 1958.

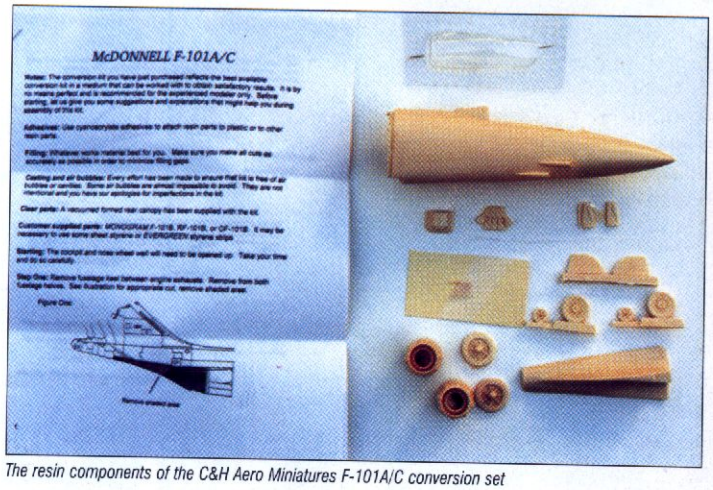
There are two 1/48th scale conversions for the F-101A/C and they come in two formats. The first being an older Koster vac-form nose conversion (RF-101A/C & F-101A/C) which consists of vac-form and some resin components. The second is a new company, C & H Aero Miniatures, which offers a resin nose conversion ($35.00 US) with a clear vac-formed canopy. The mouldings are rather crisp and pretty neat as can be seen in the photos. I chose to employ the C & H Aero miniatures nose conversion in this article. On to the building!



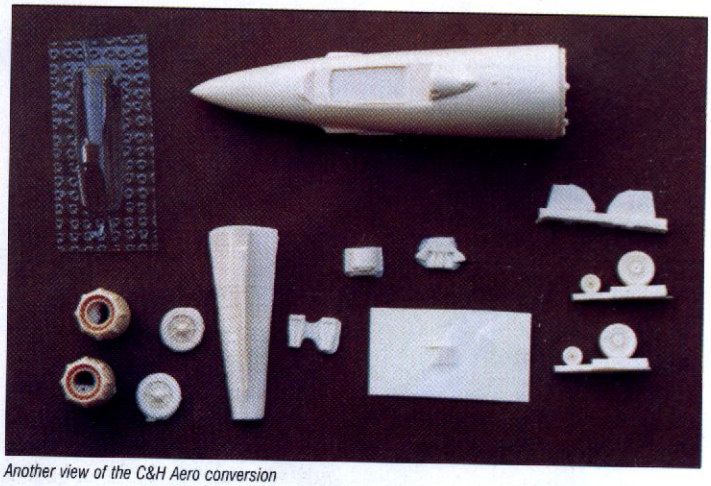
The components of the Monogram F-101B (Product No. 5811) kit

The Kit & Conversion

The Monogram kit from the old era of raised panel lines (bite your tongue!) holds up rather well in the world dominated by the big three (Hasacadamiya). The RF-101B kit (#5818) serves as an excellent and really the only starting platform for our endeavour. Monogram also made the F-101B (kit #5811) and CF-101B (kit #5829) which are identical to this kit minus a small nose cone. Excellent detail, decent cockpit, and Weber ejection seats make this kit a classic plastic offering which can be found in most shops that carry out of production kits.

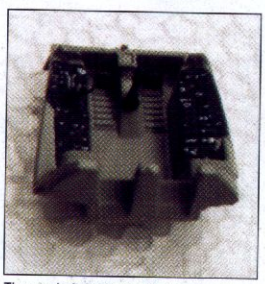


The resin components of the C&H Aero Miniatures F-101A/C conversion set



Another view of the C&H Aero conversion

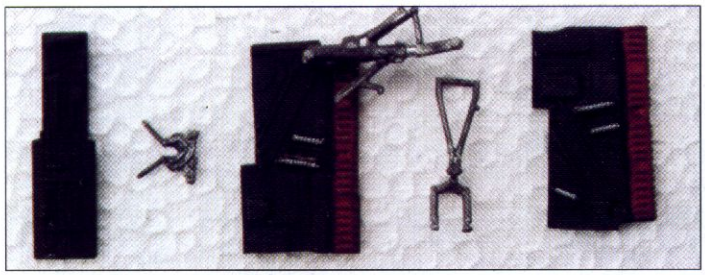
The Weber ejection seat suitably painted and detailed



The cockpit 'tub' detailed and painted

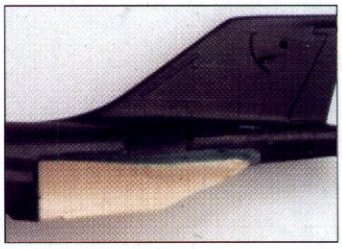
The instrument panel

The conversion from C & H Aero Miniatures consists of seventeen resin parts and one vac-formed canopy. The conversion includes a new nose, rear keel exhaust port, burner nozzles and turbine discs, nose and main wheels, main undercarriage doors, new



The painted components of the revised nose wheel well

instrument panel, canopy brace, nose pitot, and engine air scoops. The resin is well cast and has finely engraved panel lines. With just a little cleaning up, the nose will be ready for the conversion. The vac-formed canopy is easy to cut out and has nice details (Another option is to use the front windshield of the Monogram kit and cut out the back of the vac-formed canopy, which is what I did).

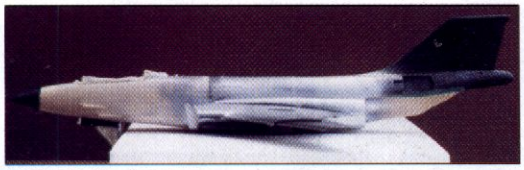


The new resin inserts around the engine exhausts

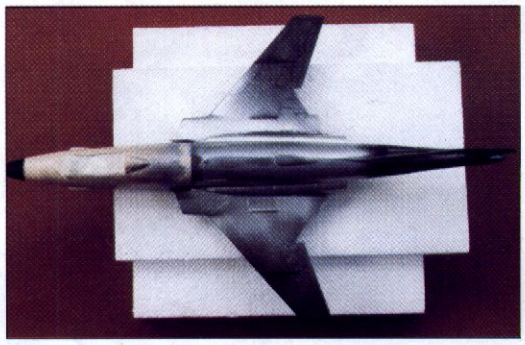
Destruction/Construction

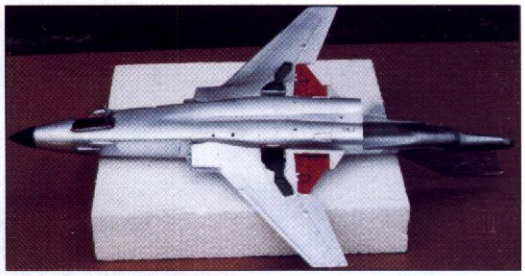
The instructions with the C & H Aero conversion are very straightforward and in most cases I followed them accordingly. The construction began with a thorough cleaning up of all the resin parts. I made the appropriate cuts in the Monogram fuselage halves with my razor saw for the nose and keel. The fuselage was then cemented together with Allweld. The tip of the keel needs to be shaped to fit underneath the tail. Otherwise the keel only needs slight filling and sanding to tidy up. The keel was fitted under the exhaust splitter, this was what I used as a guide for fit. The next area to work on was the cockpit tub, Weber ejection seat, and instrument panel. The instructions with the conversion state that the cockpit tub (F-101B) does not have to be cut. However, I chose to cut it for a better fit. I made the cut with the ever-trusty razor saw at the middle divider. Weight does not have to be added to the nose to avoid tail sitting since the resin is quite weighty. I sprayed the cockpit tub, ejection seat and instrument panel with Testors Model Master Navy Aggressor Gray (FS 36251) which seems to capture the colour of the interior of the Voodoo. I then dry-brushed the seat and tub with lighter gray and Aircraft Interior Black (black-gray). I picked out detail in the Weber seat with the appropriate tones of black and steel. I painted the headrest and arm rest with Insignia Red and moved on to the tub and instrument panel which were painted with Aircraft Interior Black again along with flat white (scale tint) for the instrument dials. All dials were coated with Testor Model Master Clear Gloss Lacquer. The cockpit was put aside as I began work on the nose wheel assembly.

Since the nose wheel assembly needed to be cut to fit into the resin nose, I cut down the interior walls and top piece. I dry-fitted the parts and when satisfied with the fit I painted them Interior Green and Insignia Red. I tried something new on the nose landing gear strut itself. I sprayed it over with Testors Model Master Aluminum Plate (Buffing Metalizer 1410) which gave the strut a high shine finish which is very realistic for the hydraulic piston part of the gear. I then dry-brushed the rest of the gear with Testors Steel (1180). I super glued this nose gear assembly into the resin nose. Once that was in place the cockpit tub was super glued into the nose (excluding the Weber ejection seat). I levelled the tub with the top of the nose gear assembly. With the tub and nose gear in place I dry-fitted the nose with the Monogram fuselage. There was a small gap (about 1.5 mm) between the resin nose and fuselage; this was rectified by super gluing the resin nose to the fuselage and filling the gap. The filling and sanding needed to be completed and ready for painting before the wings were put on since it would be very difficult to get at the gap behind the intakes. The sanding was an arduous task, but paid off in the end. The aircraft was to be finished in natural metal and this dictates a very smooth and clean surface. I sanded the filled areas and sprayed Aluminum Plate over the area repeatedly until I was satisfied with the seams and imperfections. The wings needed to be filled slightly with super glue but I was very sparing with the filling since this area was be painted in natural metal. A problem that occurred during the wing assembly, which seems to evade description by C & H Aero and Monogram, was a small gap where the trailing edge met the fuselage. The trailing edge was filled appropriately to avoid a pronounced gap in the wing. I found that one did not have to remove all of the support structures of the wing as indicated per the C & H instruction, rather just the first large support strut. The wing fit is critical to assembly so extra time spent here pays dividends.



Initial application of paint





A view of the underneath of the model once the main 'metal' effect is applied

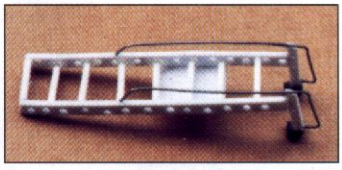
The upper surface similarly sprayed

Nearly there, the model is on its legs and all the decals have been applied

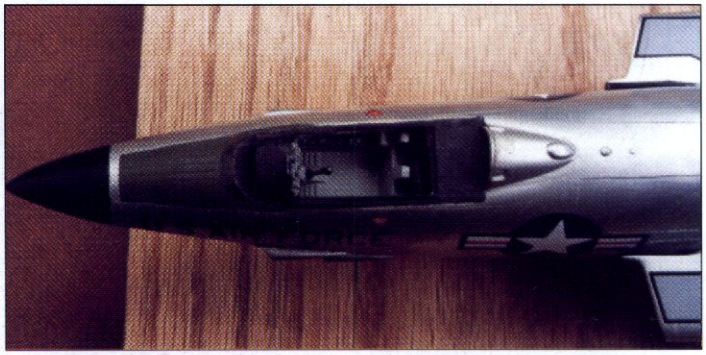
Once the wings and fuselage were assembled I removed the antenna support base from the underside of the exhaust area. The air scoops in the conversion kit were fitted to the recesses in the Monogram fuselage. These air scoops for the F-101A's Pratt & Whitney J57-P-13, are not as prominent as the ones on the F-101B (Pratt & Whitney 57-P-55, which is also 24" longer) which accommodated larger engines.

Painting

The next stage was to prepare the airframe for painting. There are many different ways to finish a natural metal airframe including the SnJ system and various acrylic finishes. I find the Testors Buffing Metalizers system very realistic and easy to apply in one step and the buffing can be varied to achieve different finishes (No, I do not have shares in the Testors Corporation!). Since the Voodoo was to be finished in Testors Model Master Aluminum Plate (Buffing Metalizer 1410) primer could not be used on the surface. I sanded down the whole aircraft with extra fine grit paper and then proceeded to polish the aircraft with Novus plastic polish. The airframe was airbrushed and then buffed with an old cotton T-shirt (best thing for buffing & polishing) to a high sheen. One needs to be careful not to buff too hard or the underlying plastic will show through and another coat of paint will be needed. This was allowed to dry overnight. The detail parts were then added to the indicated areas. I started with the resin burner cans and turbine discs. They were sanded down and dry fitted to the airframe. As this finish is rather fragile, the model was handled with latex medical gloves to avoid fingerprints and marks on the surface (a tedious task but for a realistic natural finish it is essential). When satisfied with the fit of the burner cans, I then proceeded to finish them with Model Master Buffing Metalizers (Magnesium 1403 & Gunmetal 1423). One point I would like to



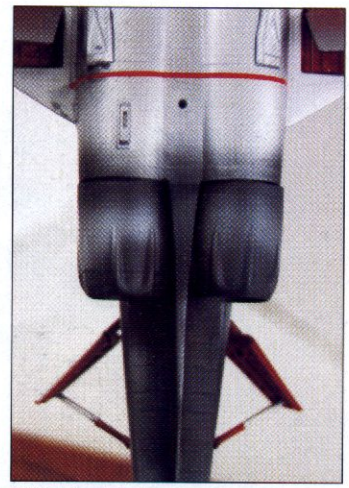
The crew access ladder made of plastic card and wire. Dimensions are approximations only, but it looks right



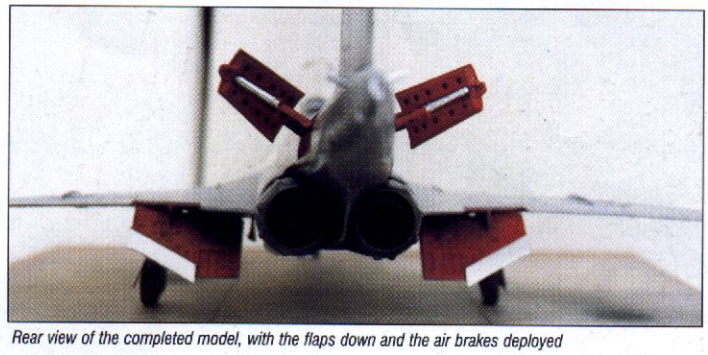
A look down into the cockpit prior to the ejection seat being finally fitted

The crew access ladder in position

Aero (Thanks John!) Flightline, which provided the much needed wingwalks, stencilling, and Stars and Bars. The Flightline sheet, which in the future I believe will be included in the C & H Aero resin conversion, has markings for a bird from the 91st Tactical Fighter Squadron, 81st Tactical Fighter Wing. The Almark sheet, if you can find it (out of production), has markings for F-101A, F-101B, CF-101B, RF-101C, and RF-101H. An application of Clear Gloss Cote was not needed as the Buffing Metalizers from Testors provided a very smooth surface for decalling and there was virtually none of the dreaded silvering. Markings were accurate and my sources seemed to confirm my notions of a bird that put the USAF test pilots and early Mercury astronauts through their paces.

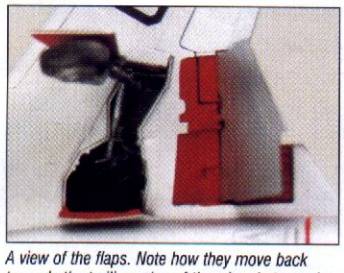

Subtle exhaust staining

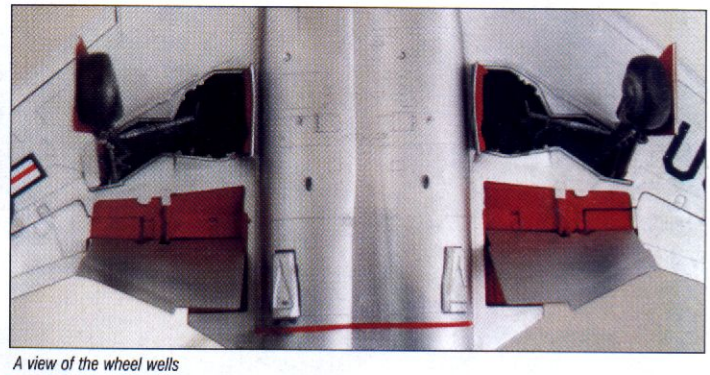
make here about the Testors Metalizer system is that I do not employ either the Testors Metalizer sealer or a clear coat (gloss or flat) since this seems to reduce the realism of the natural metal. The gunport area was finished with Testors Buffing Metalizer Stainless Steel and Titanium to achieve that brushed aluminum finish. I masked out the gunport areas with wet newspaper (which Testors recommends) and low-tack Scotch tape (blue-plaid). A rather cumbersome task, but the results were well worth it. I hear that Post-It notes also work well, although I have never tried that method.


Rear view of the completed model, with the flaps down and the air brakes deployed

Undercarriage

With the airframe painted I began work on the undercarriage assembly and wheels. The bulged lower portion of the landing gear door was removed and replaced with the flat resin example which was on the F-101A. There were no main gear attachment points (A faux pas for Monogram) so I had to test fit and measure carefully the spacing and placement of the gear. The resin wheels were then fitted and sanded. The symmetry of the main wheels needs to be in balance with the vertical axis of the aircraft for a proper fit. The resin pitot tube under the nose area from C &H Aero was added along with the extended airbrakes and flaps (this gives a dramatic account of the aircraft). The external fuel tanks were not attached as this particular aircraft did not employ them at the Test Centre at Edwards Air Force base.


A view of the flaps. Note how they move back towards the trailing edge of the wing, but remain parallel to the hinge


A view of the wheel wells

Decals

Two sheets were used to complete this kit. The first was the older Almark McDonnell Voodoo Sheet I (A48-21), which provided markings for the Edwards Test Centre aircraft and the other was a sheet provided by C & H

Canopy & Cockpit

Since there was only one canopy provided in the conversion, I was rather careful cutting out the vac-formed piece. The windshield was cut from the main vac-form canopy and discarded. The injection moulded windshield from the Monogram kit was then fitted with the vac-formed rear piece. This works best if the aircraft is to be displayed with an open canopy. All clear pieces were dipped in Future (Johnson's Klear) floor wax for a glass like finish. I masked out the canopy and airbrushed it with aluminum plate, and carefully painted the interior frame work with flat black, and added two rear view windows (Waldron). A problem was encountered with fitment of the canopy, as the tabs on the vac-formed rear canopy did not align well with the fuselage rear decking. Instead, I installed strip styrene and attached the two measured pieces to the canopy brace. This makes for a rather fiddly assembly.

Accessories

The resin pilot figure (Perhaps one of the famous test pilots of the 1950's-Yeager, Crossfield, Cooper, Carpenter etc!) came from the excellent Reheat set (USAF Pilots 1960's MC2 pressure suits RH 124). The base was red oak with a Verlinden 1/48th tarmac section (VLS39). The access ladder was made with sheet and strip styrene with fine copper wire; the scale was approximate, but it seems to work well.

Conclusion

A great project and a nice addition to my collection! The Voodoo holds a special place with me as an underrated and much maligned aircraft that was overshadowed by the F-104. This is a highly recommended conversion for all you 1950s and '60s USAF nuts and I feel it is slightly easier to tackle than the vac-formed version. I encountered very little problems in construction, only the fiddly parts in the canopy and undercarriage posed any challenges. Anyone interested in the Century Series of fighters cannot miss this one either! I plan to produce all variants of this craft for my collection, so perhaps one of the big companies could produce a newly tooled kit of a RF-101A/C/G or the F-101A/C in 1/48th scale. I hear that fifties-sixties jets might be a new wave in aircraft modelling (I think WWII has been on top of all the big injection moulded companies lists long enough!). Tamiya released a Skyray and the F-84G Thunderjet (plank wing), Monogram have re-released the Crusader and Revell is planning a F-84E Thunderjet, all in 1/48th scale, I can't wait! Perhaps a special issue on the jets of the Korean War would be a nice touch or Vietnam? All right, I'm getting carried away, Accurate Miniatures will be soon making a mass of B-25's that will take the wind out of my sails, but I can still dream.

Steven J. Corvi

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Lt Litvak taxying out on a rough field in an early Yak-1 marked with number 44 in yellow on the rear fuselage. See the colour profiles for a view of this machine (R.J. Caruana Archives)

First of the Yaks

The Yak-1

Crude by any standards, the Yak-1 provided the Soviet Air Force with a stable and strong fighter aircraft at a time it needed it most. Moreover, its simple and innovative design was easily adaptable for further development thus siring the most famous family of Soviet World War II fighters, the Yak-9 and Yak-3. Richard J. Caruana takes a close look at this little-known aircraft whose subsequent development became the benchmark by which other fighters from its native country were judged.

The design bureau led by Alexander Sergeivich Yakovlev managed to produce one of the finest lines of fighters to come out of the Soviet Union during World War II thanks to his policy of developing a single design to its limits rather than producing completely redesigned machines. This seems to have paid handsome dividends as more than 30,000 examples which evolved directly from the Yak-1 were to be delivered , with little or no disruption in output during changeovers to new versions. Moreover, their construction techniques and materials were so basic that they could even be built by semi-skilled labour.

Though practically unknown as an aviation designer, Alexander Yakovlev entered a government contest launched in 1938 which called for a new single-seat fighter with advanced features. Two years earlier, he had examined closely the Supermarine Spitfire during a visit to Britain, and just as he was embarking on his new project he even visited Germany where he gleaned as much information as possible about the Me 109R and the He 100. His creation embodied elements he had picked up from those visits, based on his belief of producing the smallest, lightest, most powerful and heavily armed aircraft possible. To these elements he added some of his own, mainly based on simplicity of construction and use of readily available materials.

The I-26 was designed to be take V.Ya. Klimov's M-105P twelve-cylinder liquid-cooled engine which was rated at 1,050hp with a Pushka cannon housed between the cylinder banks, firing through the propeller hub. Since this engine was not available at the time the prototype was nearing completion, a 1,100hp M-105 was fitted. On January 1, 1940, the I-26 was rolled out and flight-tested by Yu. Piontkovskii who managed a speed of 600km/hr (373mph). It was clearly superior to the other contestant, the I-22 (later LaGG-1) in both speed and manoeuvrability. 64 production examples of the I-26 were ordered and produced during that year, forming a special training unit responsible with the type's introduction into service, performing also the aircraft's public debut during the October flypast over Red Square. With its introduction into service the type became known as the Yak-1.

Teething troubles were mainly centred around the excessive vibration of the M-105 though modifications, including a more substantial engine mount and flexible fuel lines managed to solve it. Engine overheating was another problem which was cured by enlarging the oil radiator and moving it further forward under the nose, becoming an easily recognisable feature throughout the Yak family of fighters; the carburettor air intakes were moved to the wing roots. By that time, Klimov had improved the M-105P into the M-105PF which, equipped with a two-speed supercharger, developed 1,210hp at take-off and1,250hp at 700m (2,300ft). This engine drove a three-bladed metal constant-speed VISh-61 propeller, later replaced by a VISh-105SV.

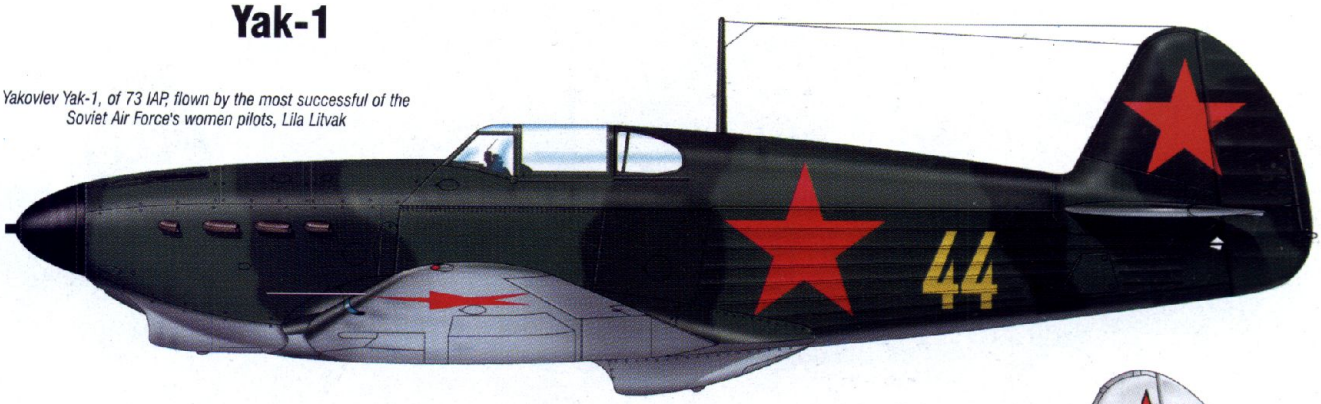
The most successful of the Soviet Air Force's women pilots flying the Yak-1 was Lt Lydia Litvak who was credited with no less than 12 victories (R.J. Caruana Archives)

The fuselage of the Yak-1 was formed from welded chrome-molybdenum steel-tubing, starting with the engine bearers, cockpit section and ending with an internally braced rear section. The cockpit was formed as a box situated between the first and second main spacers and its base formed the wing attachment points. The engine and 37litre oil tank in the front section were divided by a fire bulkhead. A close-fitting metal cowl enclosed this engine while the rest of the fuselage up to the rear end of the cockpit and the rear fuselage decking were covered in bakelite ply over wooden formers. The rest of the fuselage was fabric covered. Cockpit interior was spartan, instrumentation basic as no gyroscopic instruments were installed. A 9mm armour plate provided rear defence for the pilot while just aft of this plate a simple radio/telephone high-frequency set was installed. A simple reflector gunsight was provided for the ShVAK 20mm cannon (120 rounds) which fired through the propeller hub and the pair of 7.62mm ShKAS machine guns (750 rounds per gun) mounted above the fuselage front decking. The tailwheel was retractable on early production models but was fixed on later aircraft.

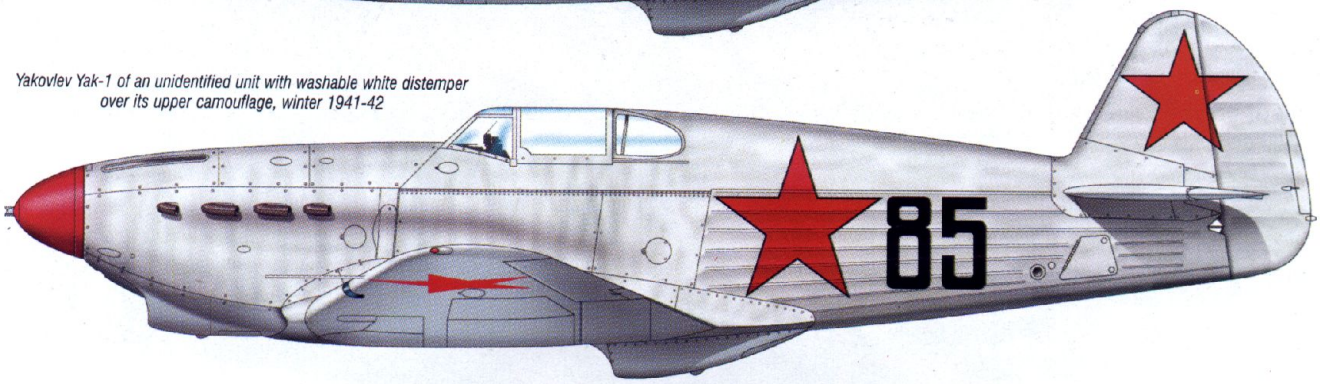
Wings were built entirely of wood as a one-piece unit around two main box spars with ply webs and pine flanges, the whole covered in ply. The whole wing was then fabric covered, giving it an extremely clean finish, broken only by the fuel filler caps, one on each wing. Frise-type ailerons were metal-framed and fabric covered, the port one incorporating a trim tab which could only be adjusted when the aircraft was on the ground. All-metal split trailing edge flaps were also fitted. Metal panels underneath the wings indicated the position of two 130litre (28.5gall) and two 74litre (16.5gall) self-sealing fuel tanks which were carried internally. The two-fork undercarriage legs retracted completely inward into wing wells, covered by split doors. Six RS-82 rockets or small bombs could be carried on racks under the wings. Tail units were of wooden

Yak-1

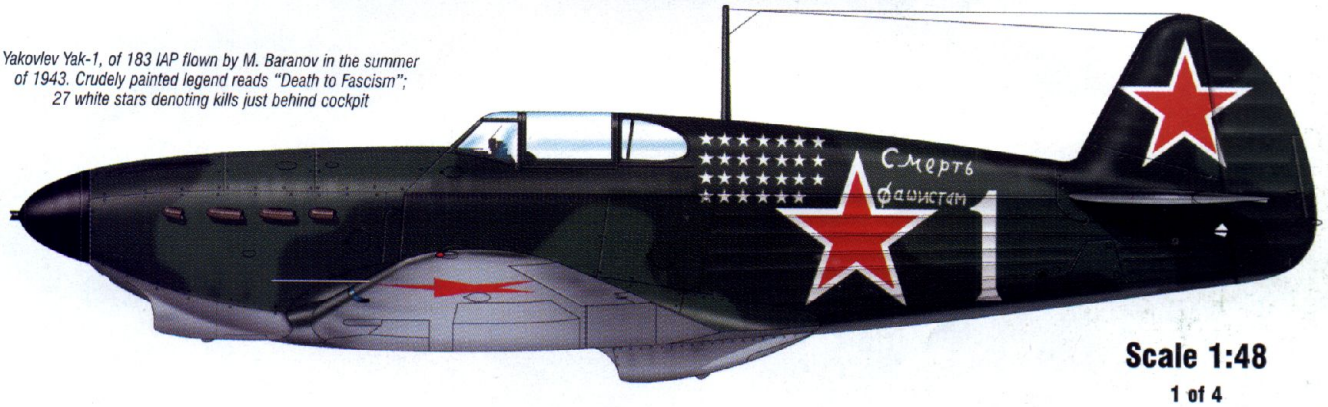
Yakovlev Yak-1, of 73 IAP, flown by the most successful of the Soviet Air Force's women pilots, Lila Litvak



Yakovlev Yak-1 of an unidentified unit with washable white distemper over its upper camouflage, winter 1941-42



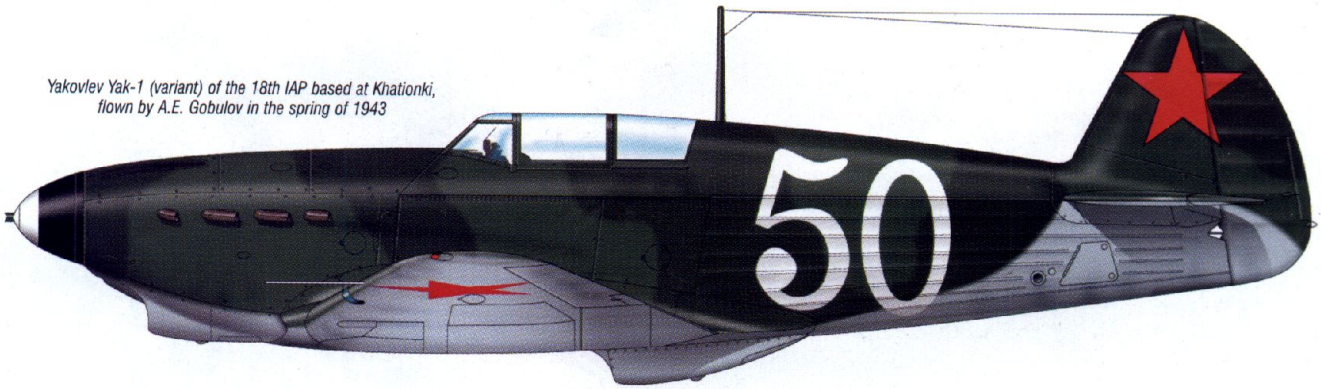
Yakovlev Yak-1, of 183 IAP flown by M. Baranov in the summer of 1943. Crudely painted legend reads "Death to Fascism"; 27 white stars denoting kills just behind cockpit



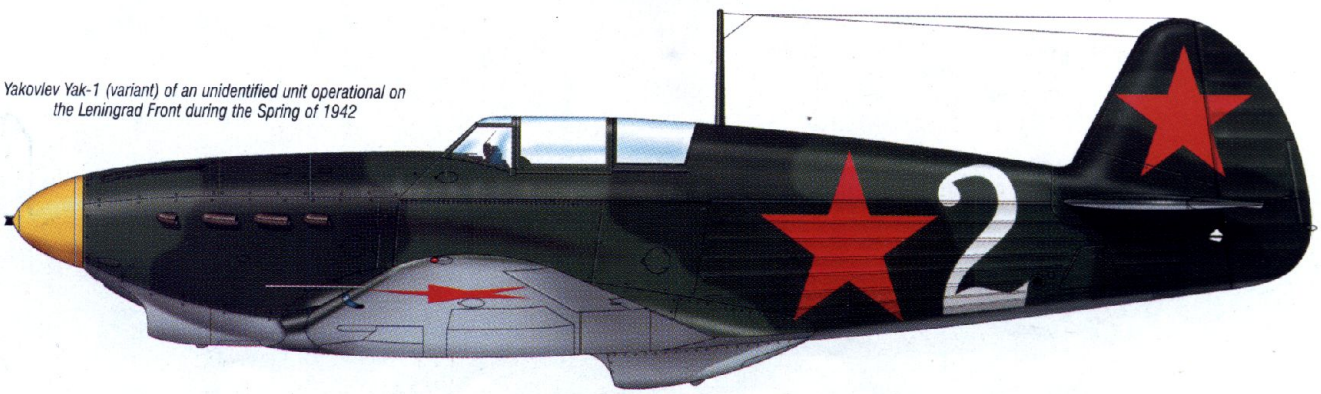
Scale 1:48

1 of 4

Yakovlev Yak-1 (variant) of the 18th IAP based at Khationki, flown by A.E. Gobulov in the spring of 1943



Yakovlev Yak-1 (variant) of an unidentified unit operational on the Leningrad Front during the Spring of 1942



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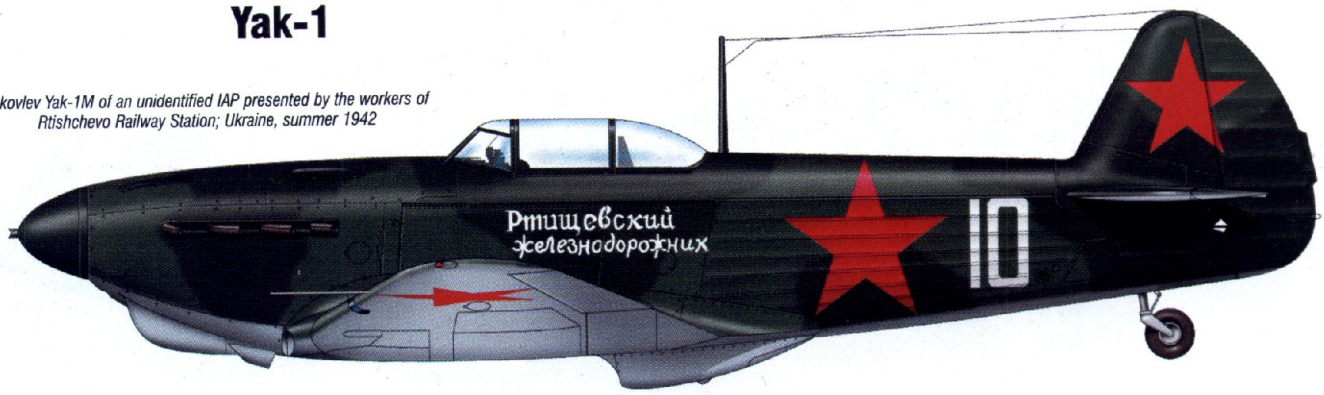
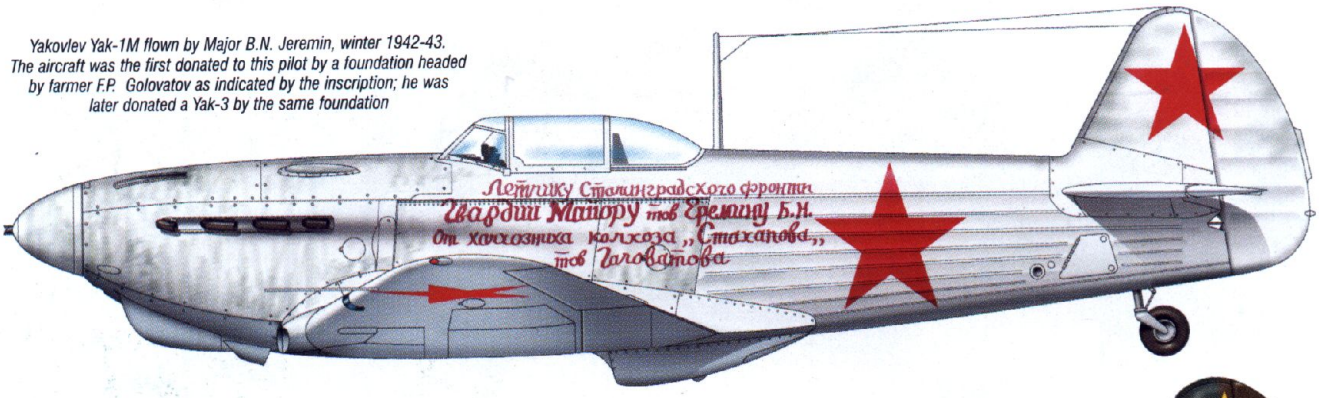
Yak-1

Yakovlev Yak-1M of an unidentified IAP presented by the workers of Rtishchevo Railway Station; Ukraine, summer 1942



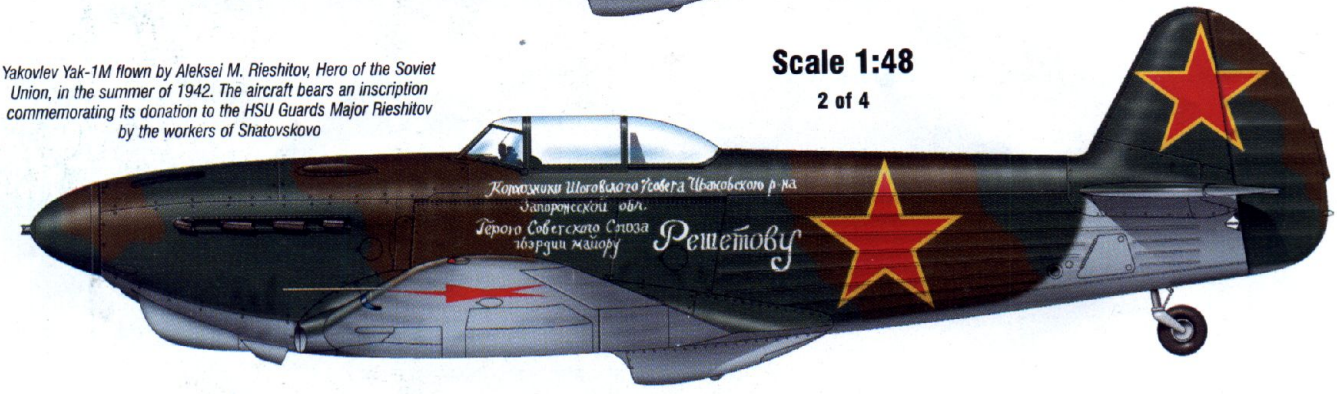
Yakovlev Yak-1M flown by Major B.N. Jeremin, winter 1942-43. The aircraft was the first donated to this pilot by a foundation headed by farmer F.P. Golovatov as indicated by the inscription; he was later donated a Yak-3 by the same foundation



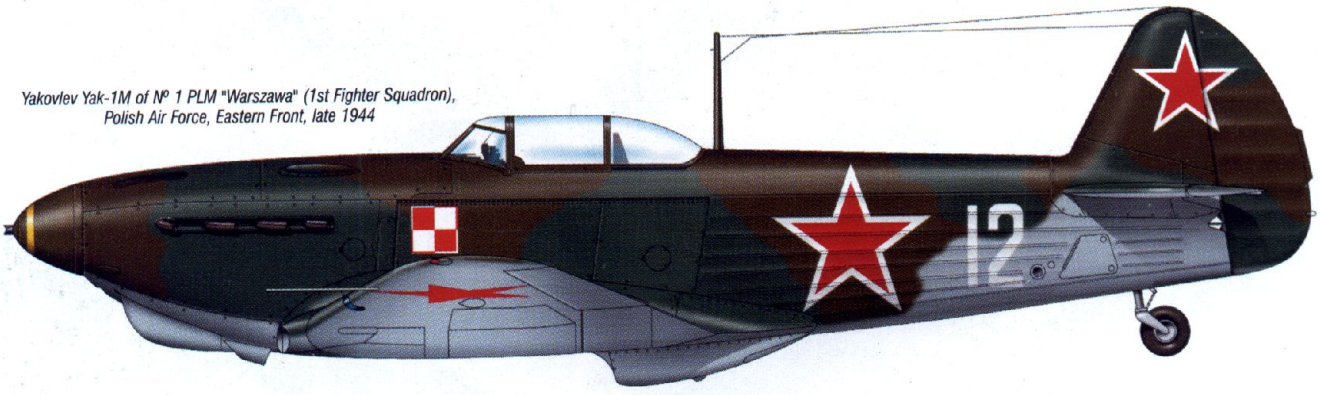
Yakovlev Yak-1M flown by Aleksei M. Rieshitov, Hero of the Soviet Union, in the summer of 1942. The aircraft bears an inscription commemorating its donation to the HSU Guards Major Rieshitov by the workers of Shatovskovo

Scale 1:48

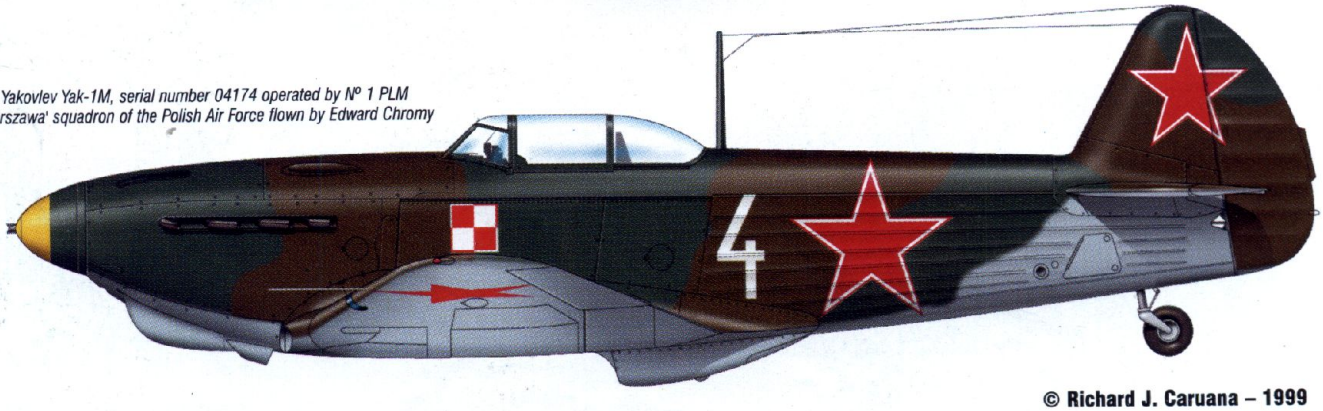
2 of 4



Yakovlev Yak-1M of Nº 1 PLM "Warszawa" (1st Fighter Squadron), Polish Air Force, Eastern Front, late 1944



Yakovlev Yak-1M, serial number 04174 operated by Nº 1 PLM 'Warszawa' squadron of the Polish Air Force flown by Edward Chromy



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Yak-1

Yakovlev Yak-1M flown by fighter ace Siergiej Luganski marked with 32 victories. Inscription recalls the presentation of the aircraft by the Youth and Young Communists of Alma Ata

Main view shows the upper surfaces of Yak-1M shown above and is typical of all camouflaged examples which are illustrated on these pages. In the two-tone green schemes, Brown is replaced by Black Green. No stars were normally carried above the wings

Right: Upper finish of post-war Polish Air Force Yak-1Ms, as applied to white '7' illustrated at the bottom of sheet 4

Left: Scrap view of the underside presentation of the Polish Air Force markings

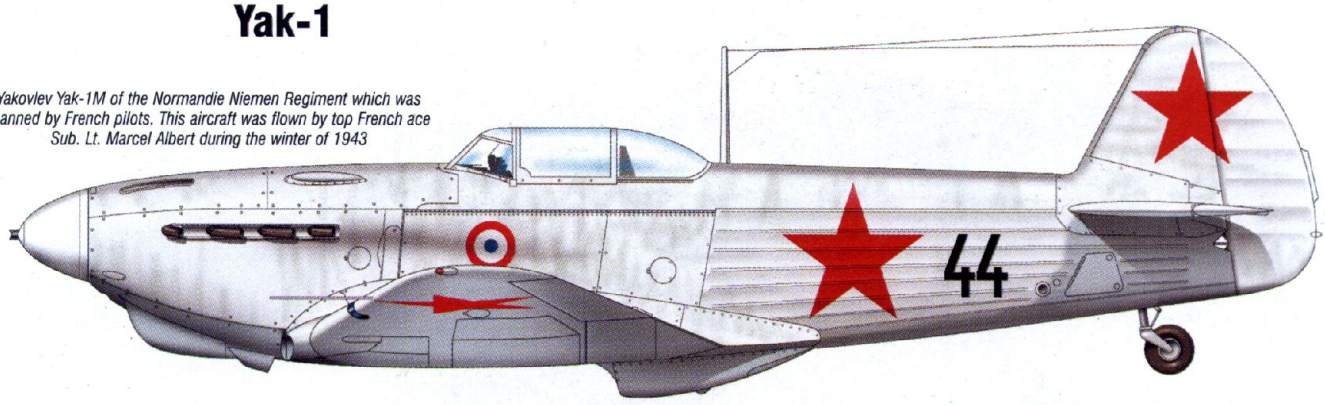
Left: Scrap view on the left shows the size and position of the underside markings, typical of all Yak-1Ms in service.

Scale 1:48

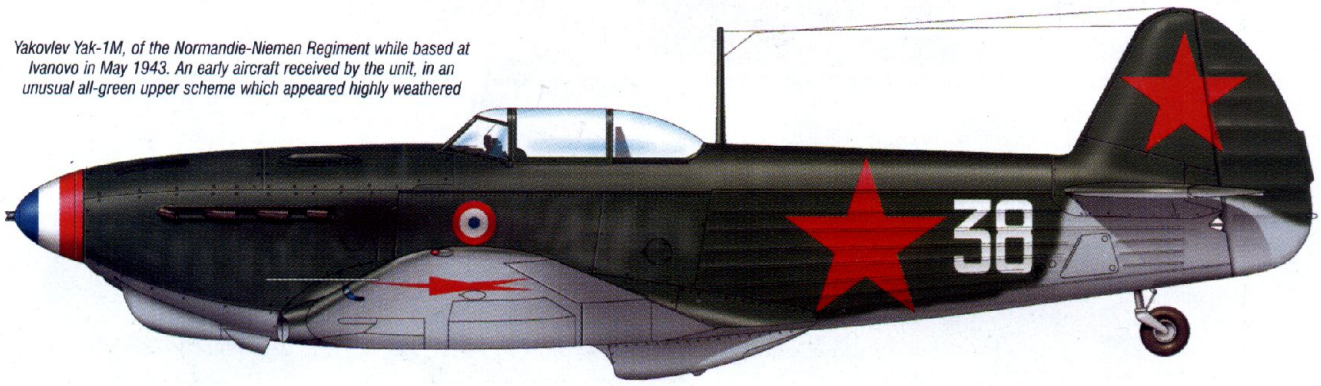
3 of 4

Yak-1

Yakovlev Yak-1M of the Normandie Niemen Regiment which was manned by French pilots. This aircraft was flown by top French ace Sub. Lt. Marcel Albert during the winter of 1943



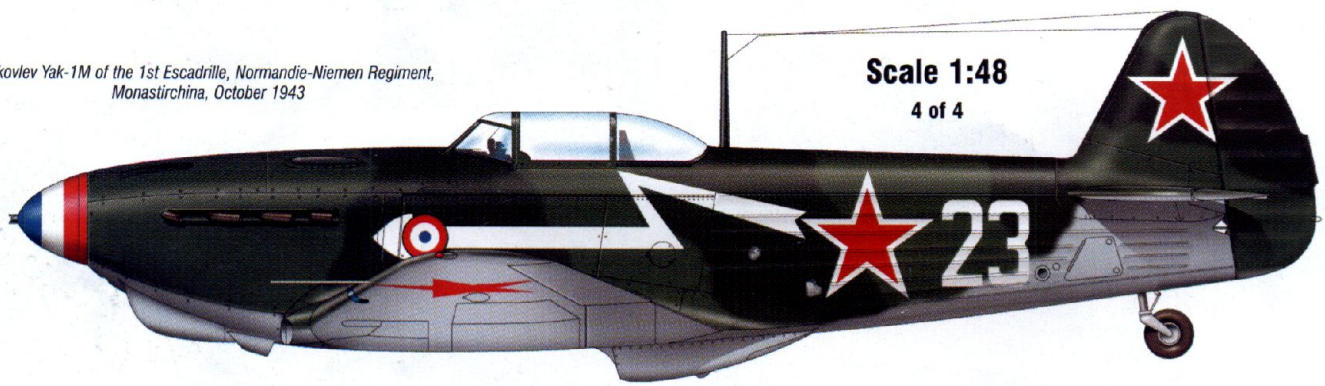
Yakovlev Yak-1M, of the Normandie-Niemen Regiment while based at Ivanovo in May 1943. An early aircraft received by the unit, in an unusual all-green upper scheme which appeared highly weathered



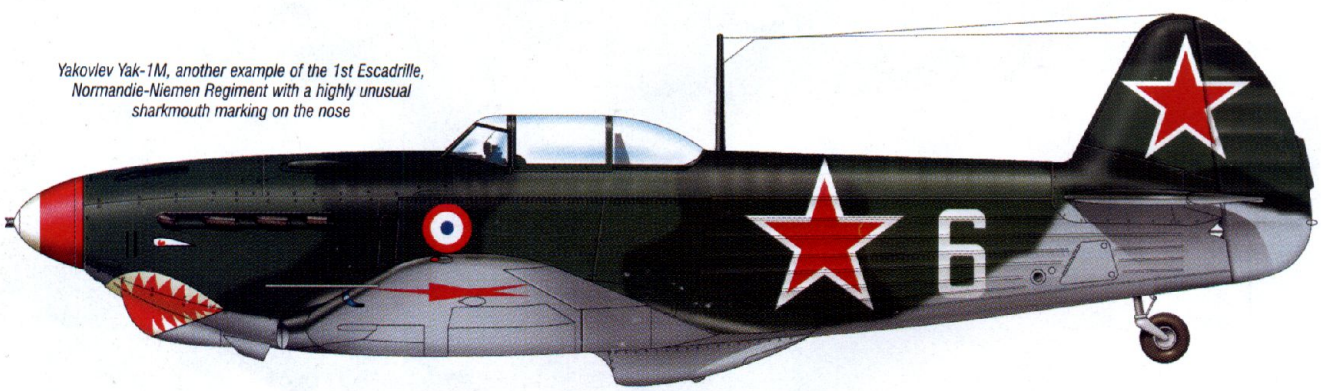
Yakovlev Yak-1M of the 1st Escadrille, Normandie-Niemen Regiment, Monastirchina, October 1943

Scale 1:48

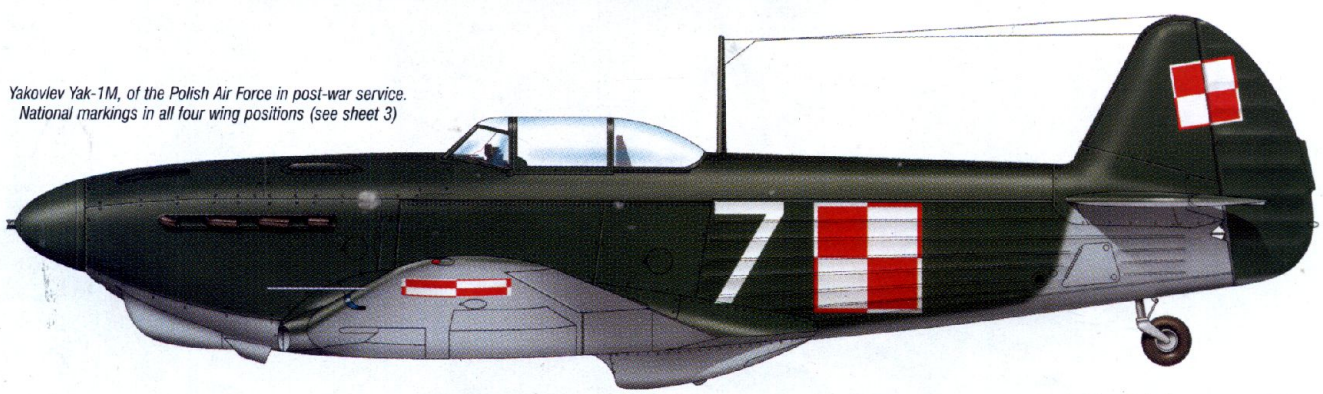
4 of 4



Yakovlev Yak-1M, another example of the 1st Escadrille, Normandie-Niemen Regiment with a highly unusual sharkmouth marking on the nose



Yakovlev Yak-1M, of the Polish Air Force in post-war service. National markings in all four wing positions (see sheet 3)



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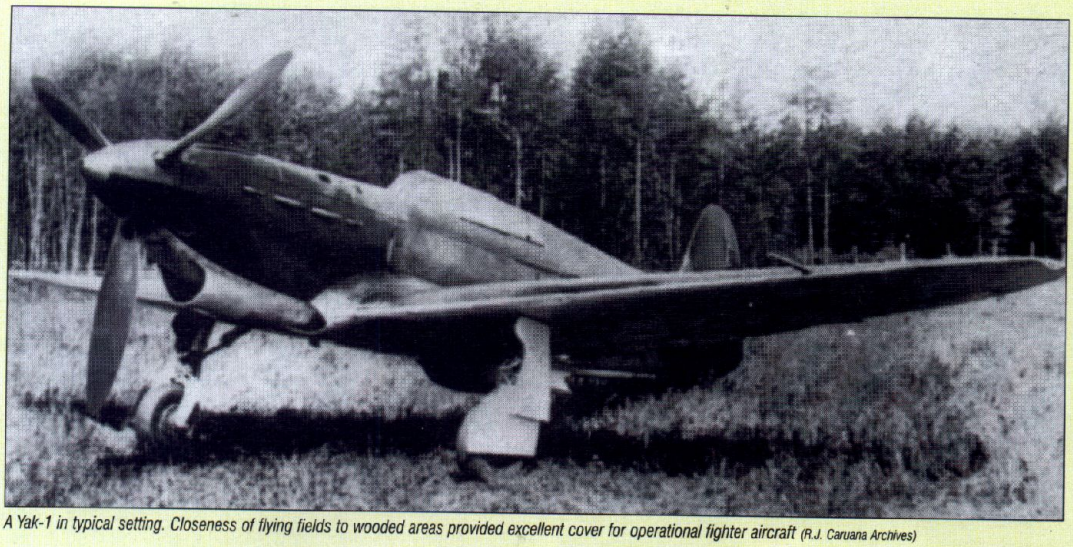


A Yak-1 in typical setting. Closeness of flying fields to wooded areas provided excellent cover for operational fighter aircraft (R.J. Caruana Archives)

construction covered in ply while moving surfaces were fabric-covered metal framed units; the port elevator incorporated a trim tab which could be adjusted in flight while the rudder's tab was fixed.

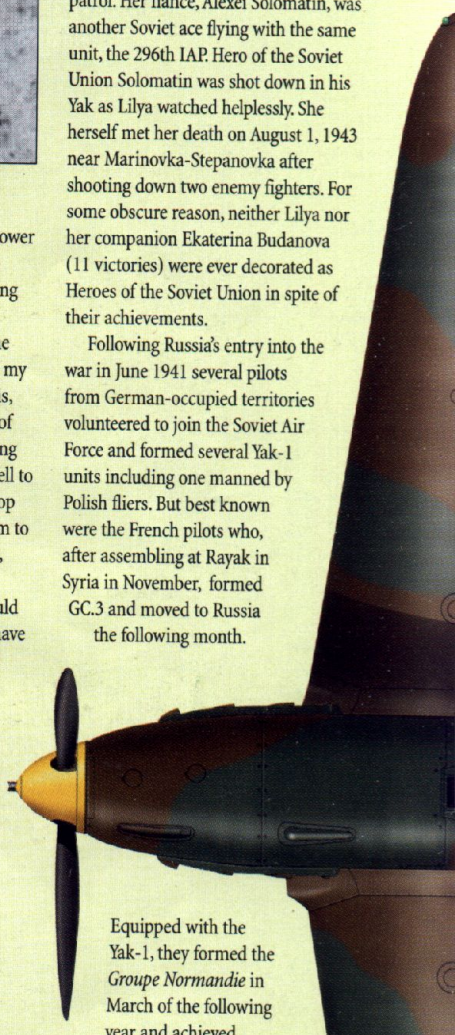
After producing some 335 Yak-1s during the first half of 1941, the production facilities, together with all personnel, which were located just outside Moscow were moved to Kamensk/Uralsk in September due to the German invasion. A remarkable feat was the roll-out of the first Yak-1 off the new assembly line just three weeks after the move, just as Yakovlev himself arrived there in mid-October. A second production line was also set up in Siberia and units of the Soviet Air Force began to fully re-equip with the type during the early months of 1942.

During 1942 Yakovlev gave his fighter a clean-up incorporating some of the modifications which had been tested to improve the Yak-1. This evolved as the Yak-1M (*Modifikatsyi*). One of the problems which pilots had encountered was lack of rearward vision. This had been partly solved by replacing the two small side windows with a glazed section aft of the sliding cockpit. Though an improvement, a more permanent solution was sought in the form of an all-glazed three-piece canopy, while the rear fuselage was cut down, thus providing excellent 360° vision. Engine power was standardised on the 1,240hp VK-105PF engine which meant a slight extension of the forward fuselage. The starboard machine gun was removed and the port one substituted by a Beresin 12.7mm UBS, as was the engine-mounted 20mm cannon. The oil radiator became smaller and was faired in a shallower nose while the starboard wing-root carburettor air intake was removed, leaving just the port one.

Some western references claim that the wing was cut down in span and area, but my sources from the east find no proof of this, thus the wing remained identical to that of the Yak-1. The clean-up resulted in a saving of weight, which from 2,820kg (loaded) fell to 2,599kg with a proportional increase in top speed from 580km/hr (360mph) at 5000m to 612km/hr (380mph) at the same altitude, though one must note that some late production Yak-1s, similarly powered, could attain 599km/hr (372mph). There must have been improvements also in range, as in ceiling which from 10,000m (32,810ft) became 10,770m (35,335ft).

8,721 examples of the Yak-1 and Yak-1M were built, of which 166 were Yak-7s, an intermediate version between the Yak-1 and Yak-3. Among the best known figures who flew the Yak-1 in combat with the Soviet Air Force was woman pilot Lidya Litvak, credited with shooting down 12 German aircraft. She joined the Air Force in 1941, already a pilot, having graduated from the Kherson flying school four years earlier. Known to her friends as Lilya, she shot down a Bf 109 and a Focke-Wulf 190 during her first offensive patrol. Her fiancè, Alexei Solomatin, was another Soviet ace flying with the same unit, the 296th IAP. Hero of the Soviet Union Solomatin was shot down in his Yak as Lilya watched helplessly. She herself met her death on August 1, 1943 near Marinovka-Stepanovka after shooting down two enemy fighters. For some obscure reason, neither Lilya nor her companion Ekaterina Budanova (11 victories) were ever decorated as Heroes of the Soviet Union in spite of their achievements.

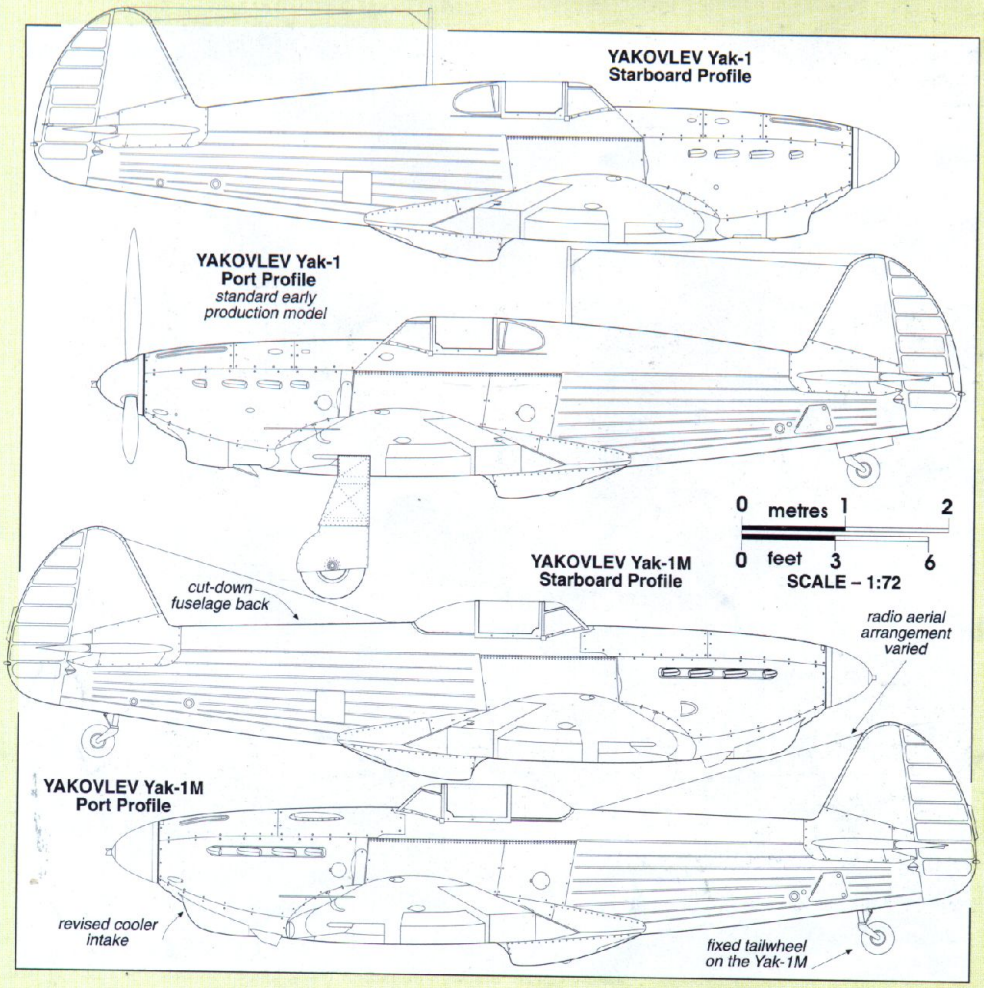
Following Russia's entry into the war in June 1941 several pilots from German-occupied territories volunteered to join the Soviet Air Force and formed several Yak-1 units including one manned by Polish fliers. But best known were the French pilots who, after assembling at Rayak in Syria in November, formed GC.3 and moved to Russia the following month.

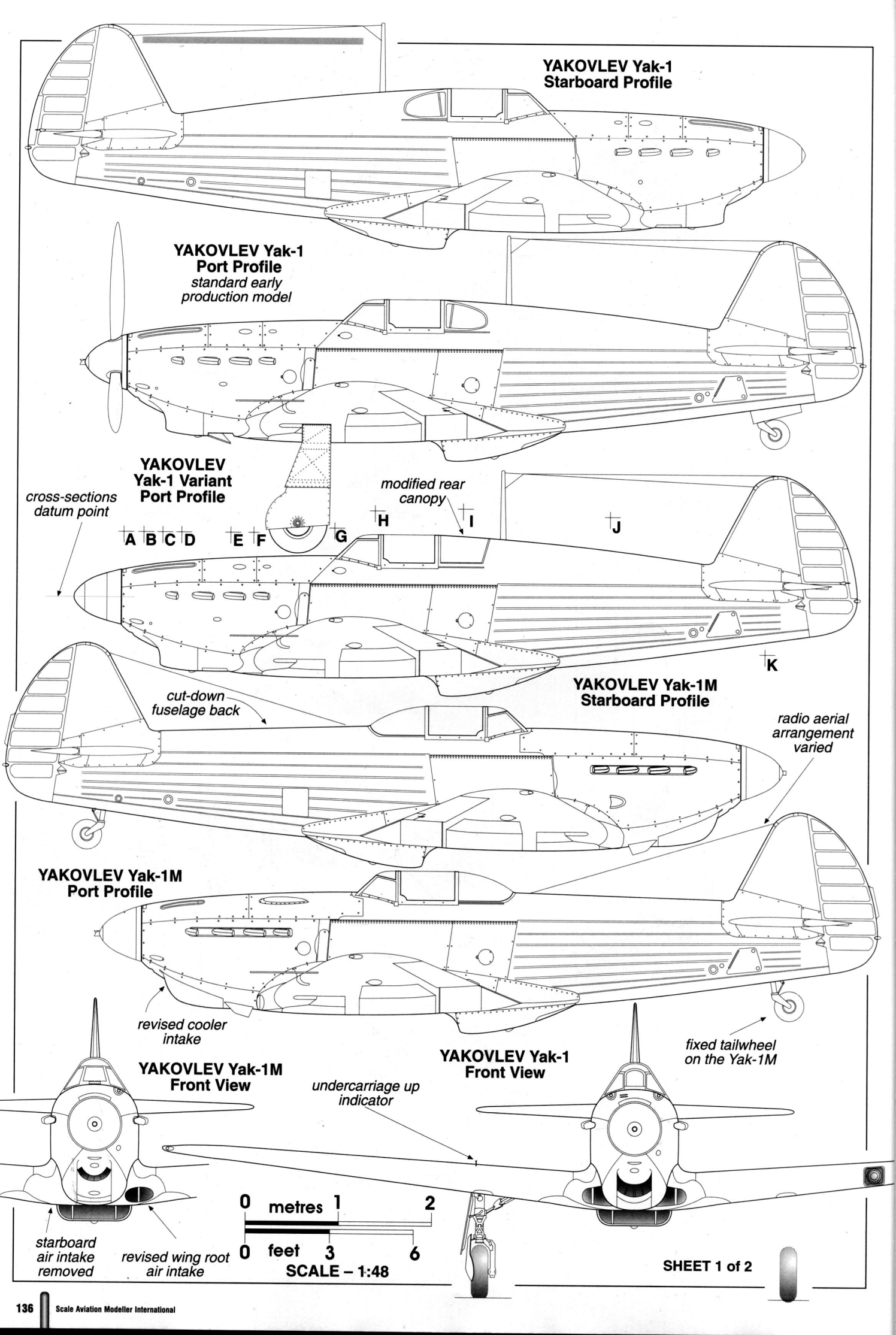


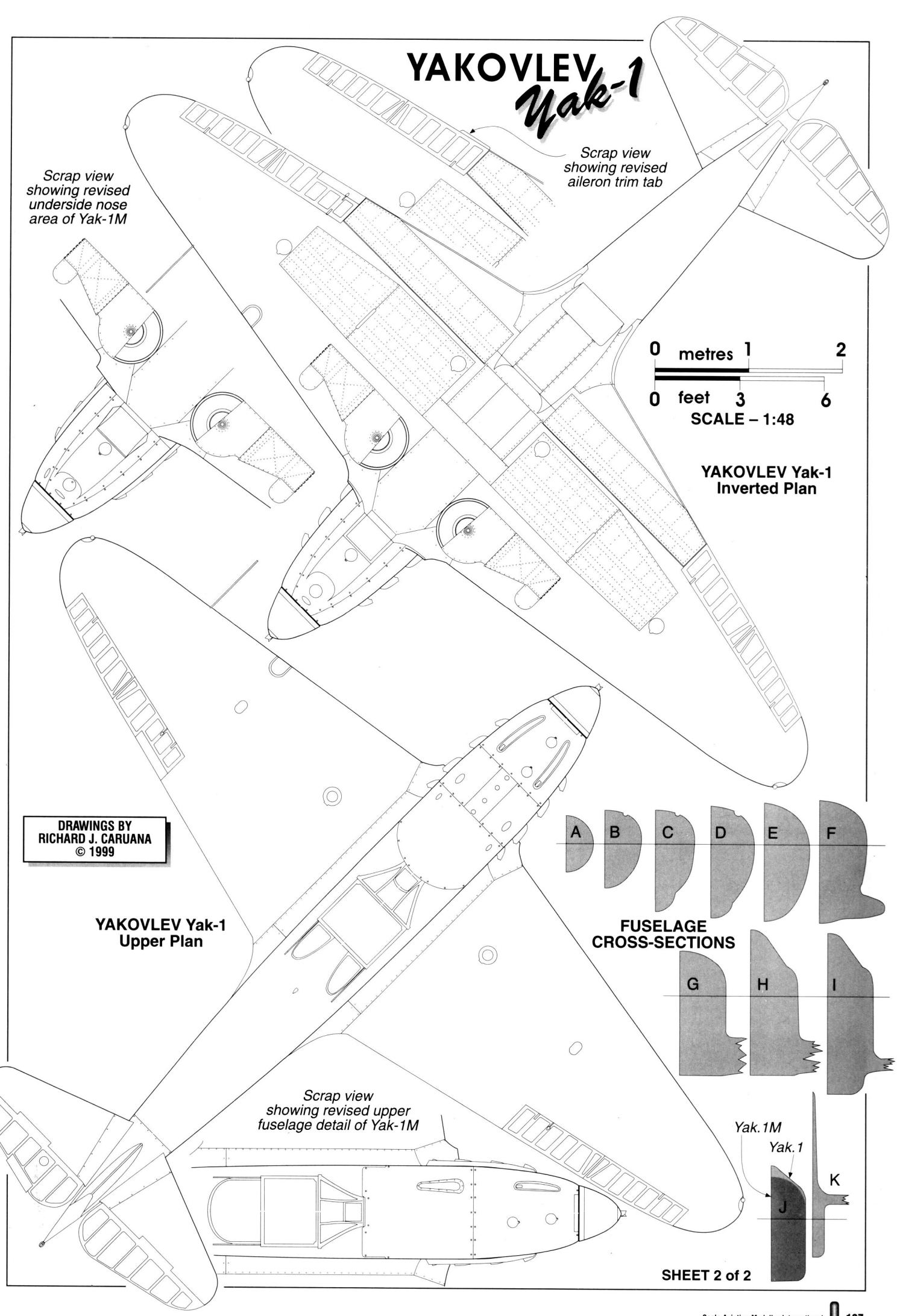
Equipped with the Yak-1, they formed the *Groupe Normandie* in March of the following year and achieved considerable success in combat. By January of the following year there were so many French volunteers who joined the group that the unit doubled in size, enough to form four *escadrilles*, which were eventually equipped with the Yak-1 successors, the Yak-9 and Yak-3. These units produced some top aces, among whom was Capt Marcel Albert who ended the war with 23 victories.

There's no doubt that the Yak-1 laid solid foundations on which Alexander Yakovlev managed to develop a series of top fighting machines thanks to the simplicity and adaptability of the original design. Probably overshadowed up to some time ago by the better known Yak-9 and Yak-3, a model of the Yak-1 deserves a place in any modeller's collection, especially since as far as colour schemes are concerned one is only spoiled for choice.

Richard J. Caruana

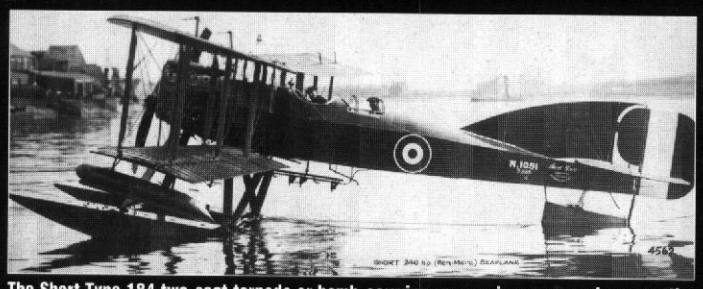



YAKOVLEV Yak-1
Starboard Profile
YAKOVLEV Yak-1
Port Profile
standard early
production model
YAKOVLEV
Yak-1 Variant
Port Profile
cross-sections
datum point
A B C D
E F
G
H
I
J
K
modified rear
canopy
YAKOVLEV Yak-1M
Starboard Profile
cut-down
fuselage back
radio aerial
arrangement
varied
YAKOVLEV Yak-1M
Port Profile
revised cooler
intake
YAKOVLEV Yak-1M
Front View
YAKOVLEV Yak-1
Front View
undercarriage up
indicator
fixed tailwheel
on the Yak-1M
starboard
air intake
removed
revised wing root
air intake
0 metres 1 2
0 feet 3 6
SCALE – 1:48
SHEET 1 of 2


YAKOVLEV Yak-1
Scrap view showing revised underside nose area of Yak-1M
Scrap view showing revised aileron trim tab
0 metres 1 2
0 feet 3 6
SCALE – 1:48
YAKOVLEV Yak-1
Inverted Plan
DRAWINGS BY
RICHARD J. CARUANA
© 1999
YAKOVLEV Yak-1
Upper Plan
A B C D E F
FUSELAGE
CROSS-SECTIONS
G H I
Scrap view showing revised upper fuselage detail of Yak-1M
Yak.1M
Yak.1
J K
SHEET 2 of 2

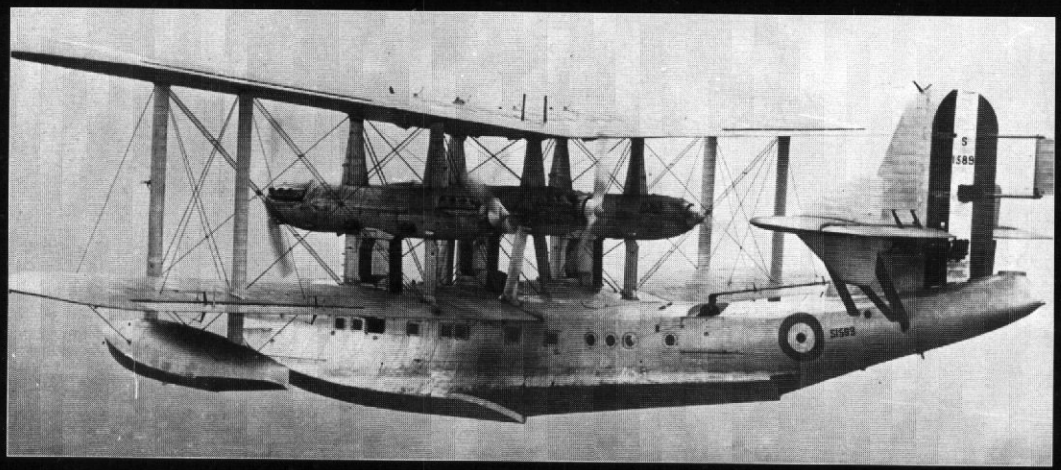
Aero Album
A Selection of Shorts

by Philip Moyes



The Short Type 184 two-seat torpedo or bomb-carrying reconnaissance seaplane was the WWI equivalent of the Fairey Swordfish. Large quantities were built, mostly by sub-contractors, and with various power-plants and in addition to RNAS/RAF use the marque saw post-war service with several foreign air arms. This Shorts-built example, N1091, had a 240hp Renault engine.

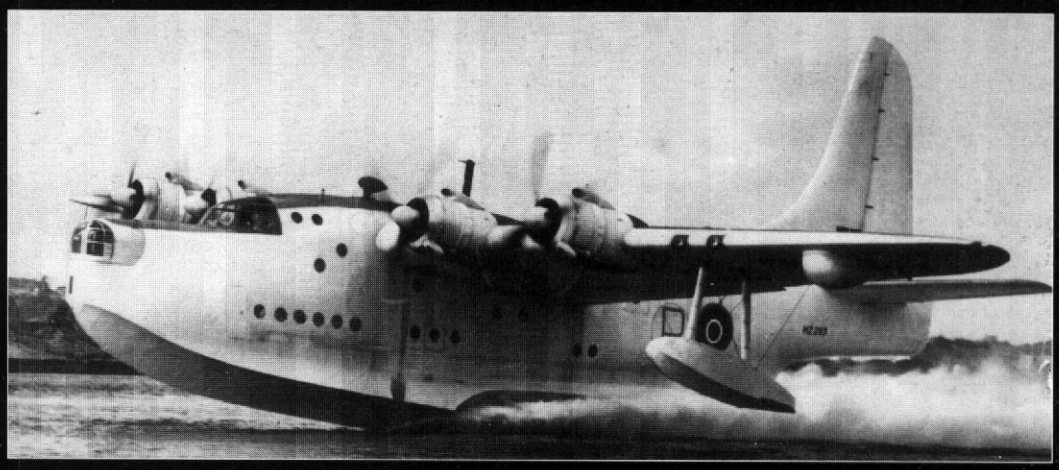
The sole civil landplane version of the nine passenger S.22 Scion Senior transport, G-AECU, first flown in July 1936 and initially used as a company demonstrator. Eventually sold to the Iraq Petroleum Transport Company in Haifa, it was requisitioned by the RAF in 1942 for service in the Middle East and was lost in action in the following year.



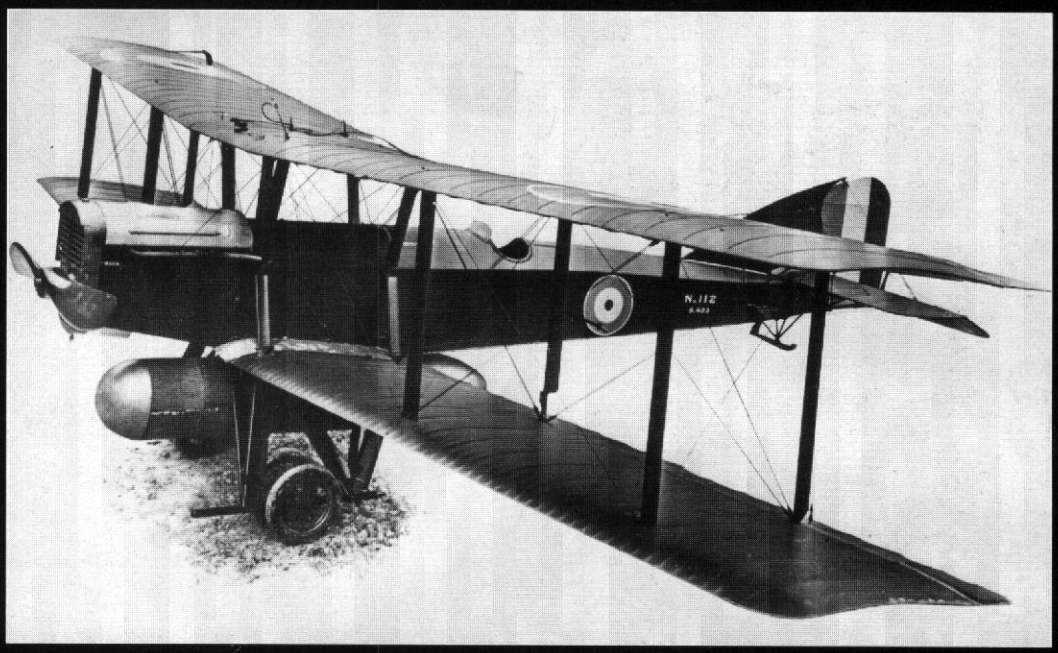
The world's second largest aeroplane at the time of its debut in 1932, the 120ft-span S.14 Sarafand was basically an enlarged version of the Singapore II long-range biplane flying-boat with six Rolls-Royce Buzzard engines instead of four Rolls Royce Kestrels (installed in tandem pairs in both cases). The sole example of the Sarafand was built for the RAF, serialled S1589, and was used for experimental work, before finally being scrapped in 1936.

The SB.5 anti-submarine aircraft of 1950, an extremely ugly derivative of the SA.2 Sturgeon TT.2 target tub. Serialled WF632, it was the first Short aeroplane to fly with turboprop engines (two Armstrong Siddeley Mambas) but the type failed to gain any production orders.

First appearing in 1943, the much used Stirling IV had nose and dorsal turrets deleted and seating for troops plus a paratroop/supply-dropping hatch for the transport role, like this example (EF317), or alternatively it had glider-towing gear installed. A fact not very widely known is that a few Mk IVs, specially equipped for ECM duties, served with 100 Group, RAF Bomber Command, due to a shortage of the Stirling B.IIIs normally used.

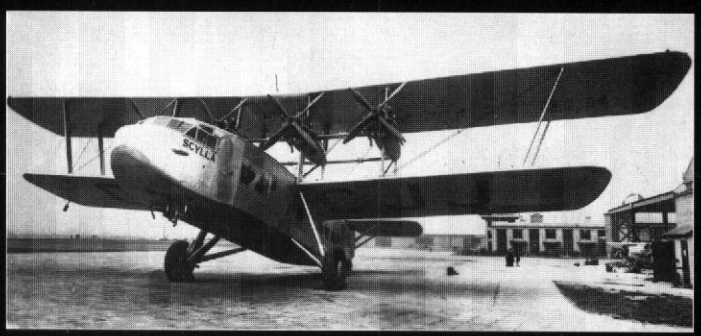


MZ269, first of the two prototypes of the S.45 Seaford I, a development of the Sunderland, first flown in August 1944 and originally known as the Sunderland IV. Thirty production Seafords were ordered for the RAF, but only eight were delivered; none were used operationally, and eventually six were converted for civil use as Solents.



The third and final prototype of the Short Shirl, a single-seat carrier-borne torpedo biplane (N112) completed in December 1918, seen adapted for testing as an experimental mailplane with a large container for half a ton of mail under the fuselage. No production Shirls ever appeared, a contract placed with Blackburn Aircraft for 100 Shirls being cancelled in favour of additional numbers of Sopwith Cuckoos.

The SC.7 Skyvan I STOL utility light transport, G-ASCN, in its original Rolls-Royce Continental piston engined form. First flown in January 1963 it was later re-engined with Turbomeca Astazou turboprops and redesignated Skyvan IA. The subsequent Mk 2, 3, 3A, 3M and Skyliner variants were also turboprop-powered.



G-ACJJ Scylla, first of two Short S.17L four engined 38 passenger landplanes using the superstructure and tail unit of the S.17 Kent (15 passenger) flying boat. This aircraft was built for Imperial Airways who used them to supplement its Handley Page H.P.42's on services to Paris and other European cities from mid-1934. Scylla was eventually wrecked by a gale at Drem in Scotland in April 1940.

S.23 G-ADHM Caledonia, second of Imperial Airways fleet of C Class flying boats. First flown in September 1936, Caledonia was one of two C-Class boats with fuel capacity increased from 650 to 2,320 gallons for long range transatlantic airmail trials. It made the first crossing from Foynes, Ireland to Botwood, Newfoundland on 5/6 July 1937. Both Caledonia and the other long-range boat, G-ADUV Cambria, had unfurnished hulls with many windows blanked off.

by Ian K. Baker

Camouflage and Markings, Imperial Japanese Air Forces, 1937-1945

Pt1. IJNAF Before Pearl Harbour

Introduction

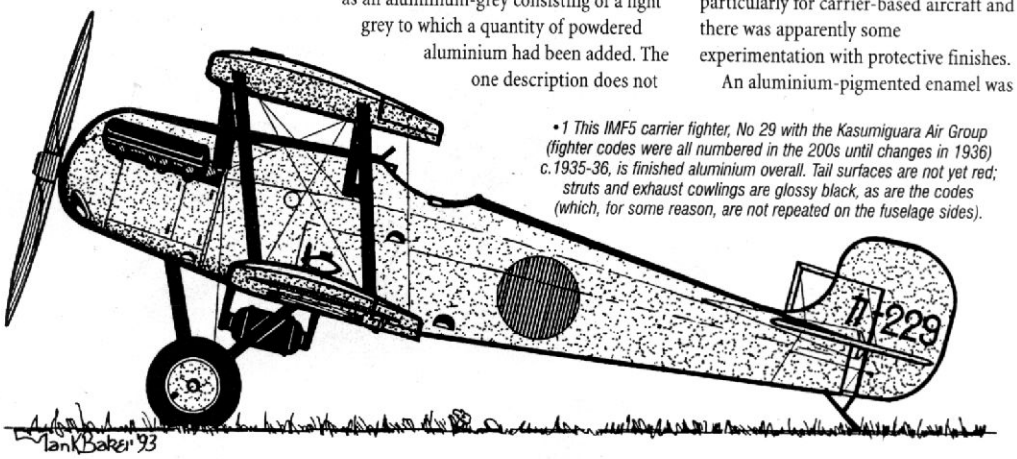
After more than fifty years, there remain many points of confusion and contradiction over aspects of Imperial Japanese aircraft colours and markings. Only some of this is inevitable.

Certainly much primary source material, the kind which confirms or denies the accuracy of information we have today, was lost for all time in the fiery defeat of wartime Japan. Nonetheless there have appeared, over the years, a host of bits and pieces of information, photographs and recollections. The main problem for many modellers is being able to track these down and bring them all together. That can be quite a task.

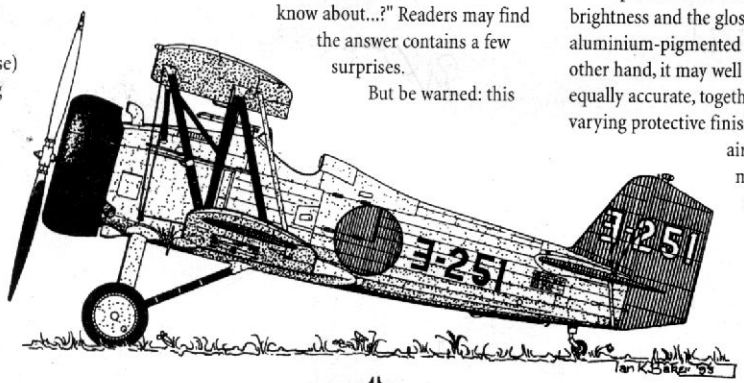
In a series of articles, of which this is the first, Colour File will attempt to save you some of the time, trouble (and expense) involved in tracking down and considering the many diverse, piecemeal, often conflicting bits of information that have not only surfaced in more recent times, but back through the years. Behind this five-part series lies a process of merging and reconciling all those gathered bits and pieces into a single coherent and useful overview: providing a synthesis of available information.

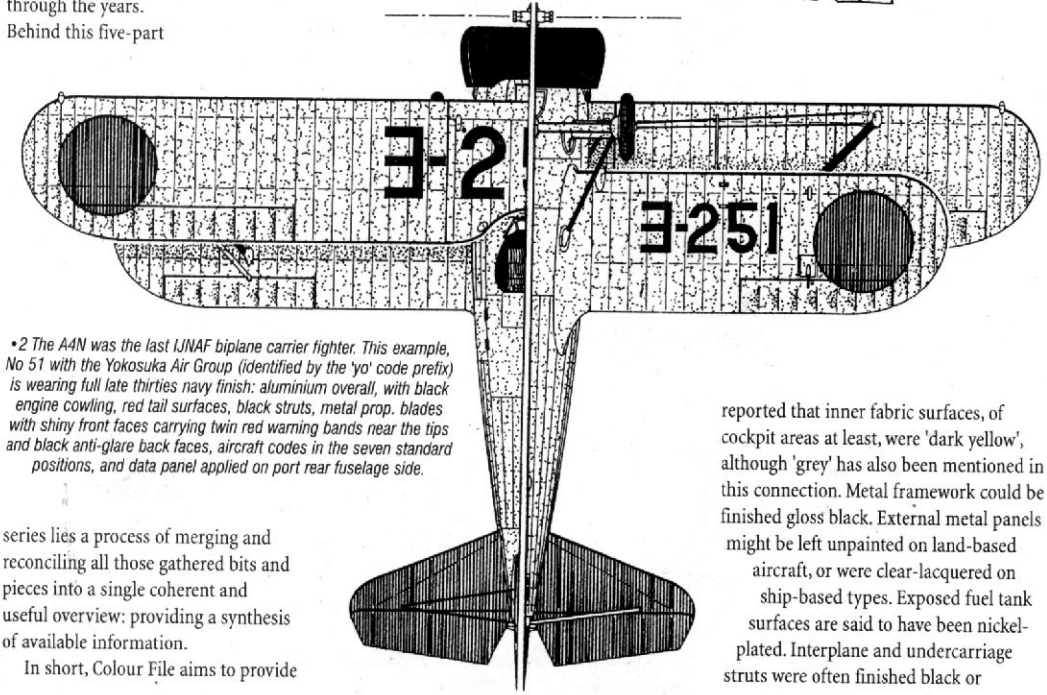
In short, Colour File aims to provide an answer to that oft-occurring question that starts with the words "What do we know about...?" Readers may find the answer contains a few surprises.

But be warned: this work certainly does not pretend to be the last word on the subject. There remain many things of which we cannot be certain, and there could well be points made here which may need to be revised at some time in the future, in the light of new information. Colour File, and the editor of Scale Aviation Modeller International would welcome any useful new information contributed by readers.



•1 This IMF5 carrier fighter, No 29 with the Kasumiguara Air Group (fighter codes were all numbered in the 200s until changes in 1936) c.1935-36, is finished aluminium overall. Tail surfaces are not yet red; struts and exhaust cowlings are glossy black, as are the codes (which, for some reason, are not repeated on the fuselage sides).





•2 The A4N was the last IJNAF biplane carrier fighter. This example, No 51 with the Yokosuka Air Group (identified by the 'yo' code prefix) is wearing full late thirties navy finish: aluminium overall, with black engine cowling, red tail surfaces, black struts, metal prop. blades with shiny front faces carrying twin red warning bands near the tips and black anti-glare back faces, aircraft codes in the seven standard positions, and data panel applied on port rear fuselage side.

Imperial Japanese Navy Aircraft, External Colours and Markings

From 1924 until later 1930's, the standard external top coat finish for IJNAF aircraft has been variously described as 'silver', and as an aluminium-grey consisting of a light grey to which a quantity of powdered aluminium had been added. The one description does not necessarily contradict the other: ageing and exposure tended to reduce the brightness and the gloss of early aluminium-pigmented finishes. On the other hand, it may well be that both are equally accurate, together describing for us varying protective finishes applied to aircraft from different makers. In any case, silvery finishes were applied generally to all external fabric and some metal surfaces.

It has been reported that inner fabric surfaces, of cockpit areas at least, were 'dark yellow', although 'grey' has also been mentioned in this connection. Metal framework could be finished gloss black. External metal panels might be left unpainted on land-based aircraft, or were clear-lacquered on ship-based types. Exposed fuel tank surfaces are said to have been nickel-plated. Interplane and undercarriage struts were often finished black or varnished dark brown, although wing-fuselage bracing struts would appear generally to have been painted the aluminium, or aluminium-grey, of the wings and fuselage.

Fighting Corrosion

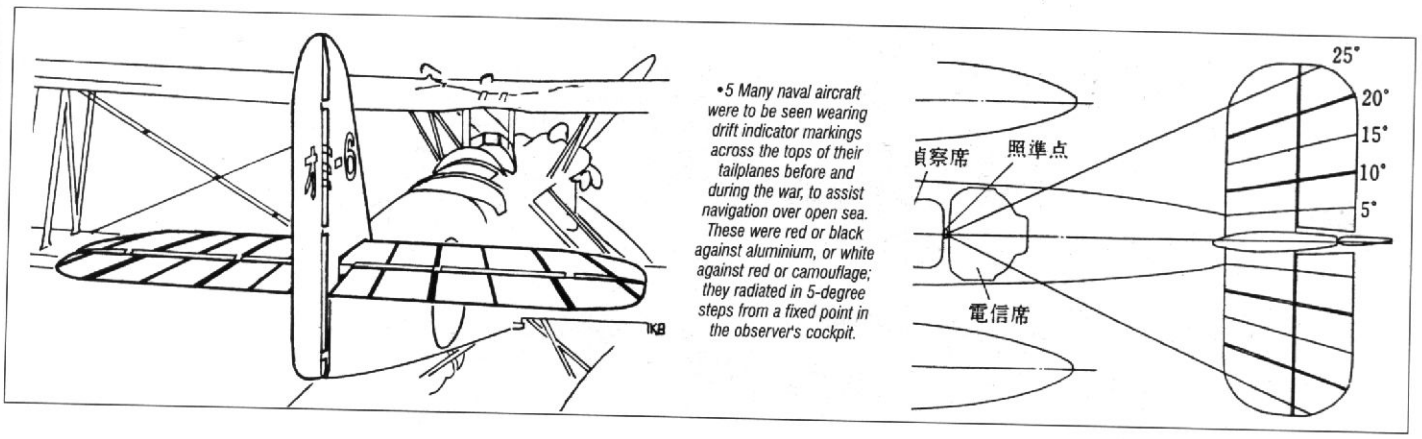
With the introduction of metal-clad aircraft in the later 1930s, some polished bare metal surfaces were initially to be seen on certain new types of navy aircraft, such as A5M1 fighters (later known to the Allies as Claude) when they were land-based.

But protection against corrosion was a major consideration for the navy, particularly for carrier-based aircraft and there was apparently some experimentation with protective finishes.

An aluminium-pigmented enamel was tried and found to be inadequate by itself and so an additional glossy, clear, sealing coat was applied over it. This preparation apparently possessed a pale, brassy golden-brown colouration to it, much like a pale wood varnish, although it has also been remembered as being more red-brown. There appears to be no doubt that many A5Ms (A5M2s in particular) wore this translucent, shiny, brassy or brownish-coloured finish. The extent to which this preparation was also applied to the external metal surfaces of other navy aircraft remains unclear, although its application has been reported as being usual from 1940.

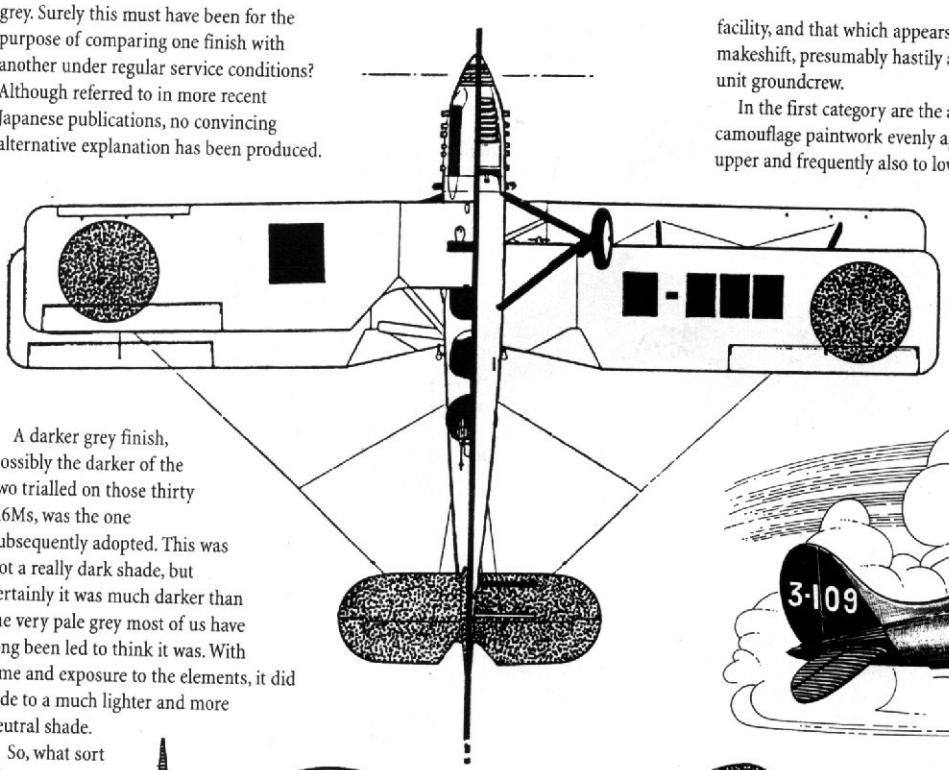
Early examples of the new G3M (later, Nell) twin-engined attack bombers and some of the B5N (later, Kate) attack bombers appear to have initially entered service in the short-lived overall natural metal finish. There has never been any specific suggestion of their having been given the clear sealing finish, yet it seems likely that they might have. The new H6K (later, Mavis) four-engined flying boats apparently wore a bright aluminium paint finish, and it is surely to be expected that they would have been given the clear lacquer protective top coat, conferring that vaguely brassy/brownish colouration seen on the A5Ms. For the A6M (Zero) a new grey-coloured finish was adopted.

When the first A6Ms entered service there must have been some continuing experimentation with alternative protective finishes, as the first thirty A6Ms with the 12th Air Group operating in Chinese skies flew with their wings and forward fuselages, to the mid-point of the Hinomaru, painted a darker grey than the rear portions, which were a much lighter



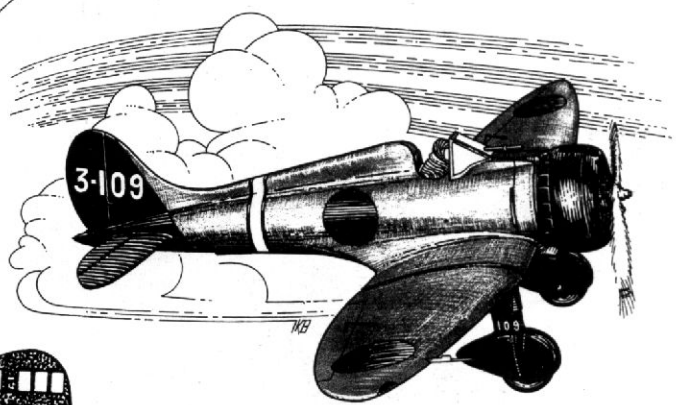
•5 Many naval aircraft were to be seen wearing drift indicator markings across the tops of their tailplanes before and during the war, to assist navigation over open sea. These were red or black against aluminium, or white against red or camouflage; they radiated in 5-degree steps from a fixed point in the observer's cockpit.

grey. Surely this must have been for the purpose of comparing one finish with another under regular service conditions? Although referred to in more recent Japanese publications, no convincing alternative explanation has been produced.



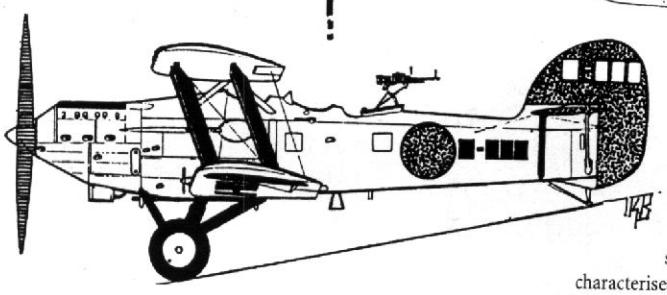
•6 The 12th Air Group's fighter squadron enjoyed much success in the air war over China once it had re-equipped with the A5M. IJNAF combat aircraft no longer wore codes on wings and fuselage. Note the white China theatre ("border breakthrough" or "field identification") tail band worn in common with army aircraft at the time. Black cowling, red tail, tailband outlining and undercarriage. Overall aluminium finish, possibly with the clear protective topcoat which gave it a brassy colouration, although that is uncertain as this was a land-based unit.

A darker grey finish, possibly the darker of the two trialled on those thirty A6Ms, was the one subsequently adopted. This was not a really dark shade, but certainly it was much darker than the very pale grey most of us have long been led to think it was. With time and exposure to the elements, it did fade to a much lighter and more neutral shade.



So, what sort of grey was this, if not a pale, whitish one? It turns out that the answer to this question is not a simple one. Three of the more useful attempts at describing the actual colour of this grey are: "grey mouse colour", "ash green" and "putty colour". A Japanese writer attempting to describe the colour likened it to the better-known Luftwaffe colour of the 1930s and '40s, RLM 02, but added that the Japanese grey was somewhat darker, and possessed hints of khaki and yellow ochre in it.

This topic will be fully discussed in Part 2, along with provision of FS, BS, Methuen & Pantone colour equivalents.



•4 The seven standard positions for the marking of aircraft codes. The aircraft is a 3MR4 (or M2M1 in the later designation system) carrier attack bomber.

Sino-Japanese War: Camouflage on IJNAF Aircraft

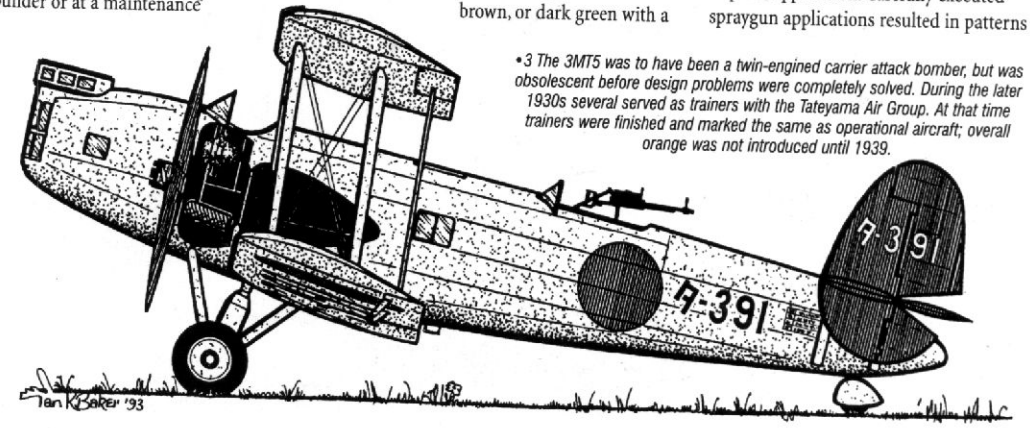
With the renewal of hostilities between China and Japan in 1937, those Japanese Navy aircraft actively involved soon appeared in camouflage.

Photographic evidence strongly suggests that, in terms of appearance and style, we may divide IJNAF camouflage of that period into two initial categories: that which appears to have been carefully and thoroughly applied, either by the builder or at a maintenance facility, and that which appears much more makeshift, presumably hastily applied by unit groundcrew.

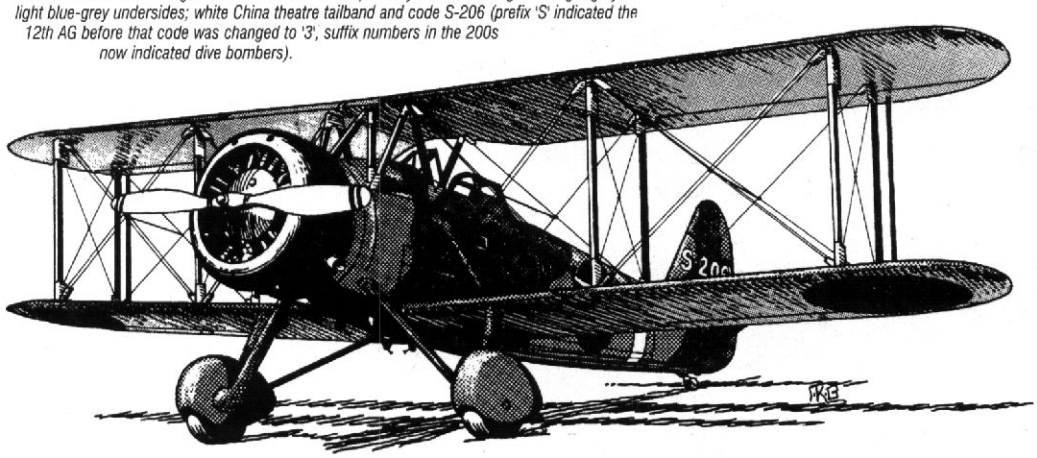
In the first category are the aircraft with camouflage paintwork evenly applied to upper and frequently also to lower surfaces, insignia and codes applied or re-applied over the camouflage finish. The second category is characterised by camouflage paintwork which is either thick and matt, or thin and skimpy, applied only to upper surfaces, generally leaving black engine cowlings and undersides untouched and often simply avoiding markings rather than having them masked off.

The colours used for this camouflage were mostly dark green and dark brown, or dark green with a medium-to-light brown or ochre. Three- and four-colour camouflages have been mentioned, but lack of photographic support for this on naval aircraft leads this writer to suspect confusion with Army camouflages of the time. There is no evidence to hand that there was a standard design or pattern for the disruptive-style camouflage after the manner of those set by the RAF, for example, but with factory batches of the same aircraft type there could, not unnaturally, be a close similarity of design. This certainly seems to be discernible on numbers of E7K and E8N (later to be known as Alf and Dave respectively) floatplanes.

The style of this 'China scheme' disruptive camouflage would appear to have been determined more by the method of paint application. Carefully executed spraygun applications resulted in patterns



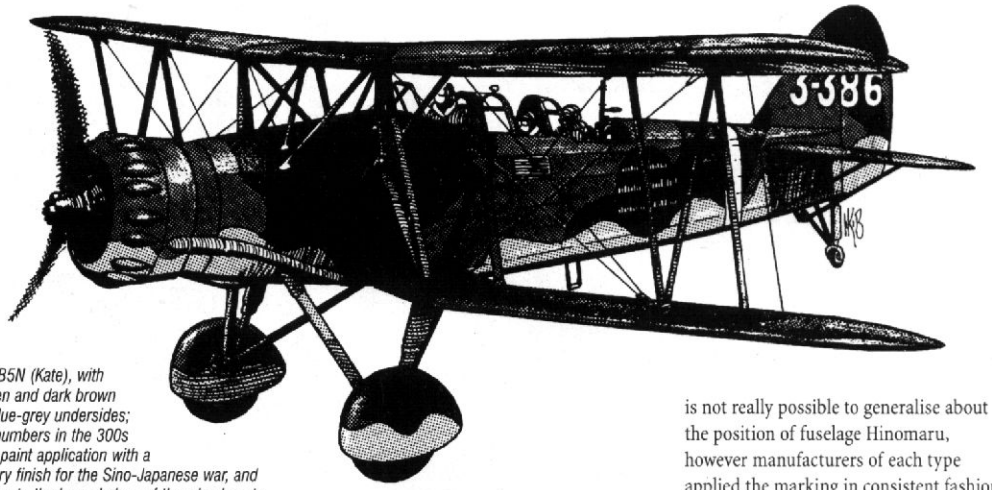
•3 The 3MT5 was to have been a twin-engined carrier attack bomber, but was obsolescent before design problems were completely solved. During the later 1930s several served as trainers with the Tateyama Air Group. At that time trainers were finished and marked the same as operational aircraft; overall orange was not introduced until 1939.



•7 D1A carrier dive bomber, precursor to the famous D3A (Val), with the 12th Air Group in the air war over China. Dark green and dark brown disruptive style of camouflage with light grey or light blue-grey undersides; white China theatre tailband and code S-206 (prefix 'S' indicated the 12th AG before that code was changed to '3', suffix numbers in the 200s now indicated dive bombers).

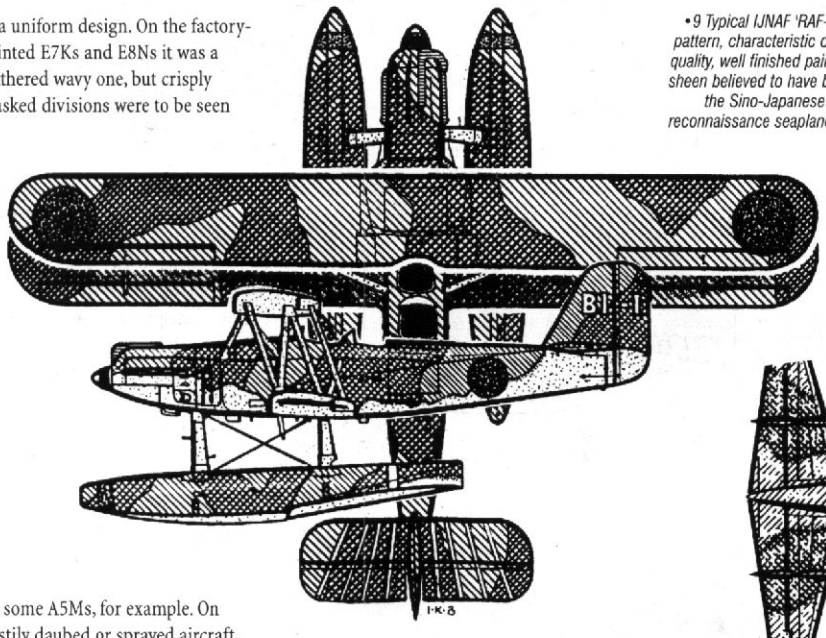
which could often be described as 'RAF-style' in their appearance. The spraygun was also used for some of the hasty applications which, although essentially disruptive patterns in a similar style, frequently ended up looking decidedly patchy and motley when viewed close-up. Brushed applications' colour divisions could be somewhat simple and either almost angular or quite ragged and looking decidedly 'brushed'.

The demarcation line between the upper and lower surface colours did not conform



•8 B4Y carrier attack bomber, precursor to the famous B5N (Kate), with the 12th Air Group in the air war over China. Dark green and dark brown disruptive style of camouflage with light grey or light blue-grey undersides; white China theatre tailband and code 3-386 (suffix numbers in the 300s indicating attack bombers). Good quality, well finished paint application with a low gloss sheen, believed to have been required factory finish for the Sino-Japanese war, and note the curious manner of applying the underside colour to the lower halves of the wheel spats.

to a uniform design. On the factory-painted E7Ks and E8Ns it was a feathered wavy one, but crisply masked divisions were to be seen



•9 Typical IJNAF 'RAF-style' disruptive camouflage pattern, characteristic of the appearance of the good quality, well finished paint application with a low gloss sheen believed to have been required factory finish for the Sino-Japanese war, seen here on a E7K reconnaissance seaplane off the cruiser Naka. Colours were dark green and brown uppers with pale grey or blue-grey undersides.

on some A5Ms, for example. On hastily daubed or sprayed aircraft, such as some G3M and G4M (later known as Nell & Betty respectively) twin-engined bombers, the division between the upper and lower colours could look very ragged. This has resulted, in the past, in some illustrators showing these as mottled camouflage.

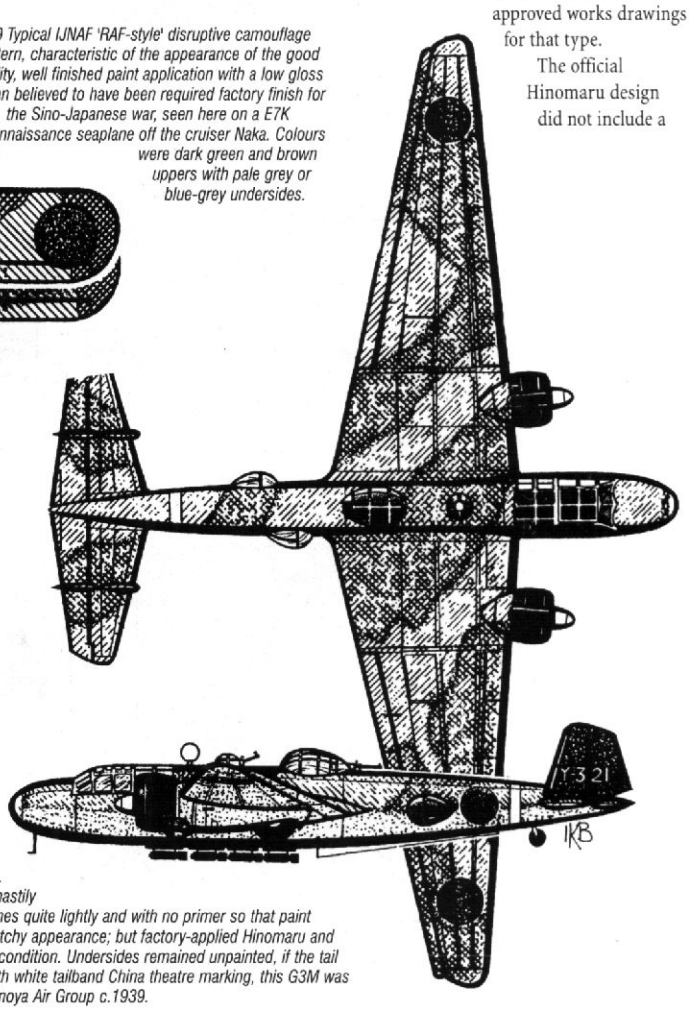
Wing, wheel and float struts were sometimes finished in the light underside colour, sometimes in the dark upper camouflage colours.

National Insignia on IJNAF Aircraft

The Japanese national marking for aircraft was a red disc called, in Japanese, Hinomaru. IJNAF aircraft consistently wore the Hinomaru in the 'six standard positions': fuselage sides, the upper surfaces of upper wings and lower surfaces of lower wings (biplanes) or the upper and lower surfaces of wings (monoplanes). The guiding principle for setting the diameter of this marking appears simply to have been that it should be as large as possible given the particular shape, characteristics and dimensions of each aircraft type.

Hinomaru on wings were placed well outboard, usually close to wingtips and positioned mid-chord so that a segment was invariably carried on aileron surfaces. On fuselage sides of earlier biplane types it appears the Hinomaru was often centred approximately midway between wing and tail plane leading edges, otherwise midway between lower wing trailing edge and tailplane leading edge. For the later monoplanes it is not really possible to generalise about the position of fuselage Hinomaru, however manufacturers of each type applied the marking in consistent fashion, no doubt in conformity with officially approved works drawings for that type.

The official Hinomaru design did not include a



•10 One variant of the disruptive camouflage patterns seen on G3M attack bombers over China. A field or maintenance depot application, typically hastily sprayed on in dark green and brown, sometimes quite lightly and with no primer so that paint adhesion was poor, soon creating an uneven, patchy appearance; but factory-applied Hinomaru and black engine cowlings remained in much better condition. Undersides remained unpainted, if the tail had been red, this would have shown as well. With white tailband China theatre marking, this G3M was No.21 with the Kanoya Air Group c.1939.

white edge at that time, although outlining for improved visibility was apparently permitted. When 'China scheme' camouflage was applied at unit level a thin outlining circlet or halo of the previous light colour, 'silver' or grey, might be left. With factory-applied camouflage, thin white outlines were frequently added, but on many floatplanes underside grey was used. However, light outlining of any kind was frequently painted out by units, thereby improving the camouflage effect when aircraft moved into actual combat zones.

Red Tails

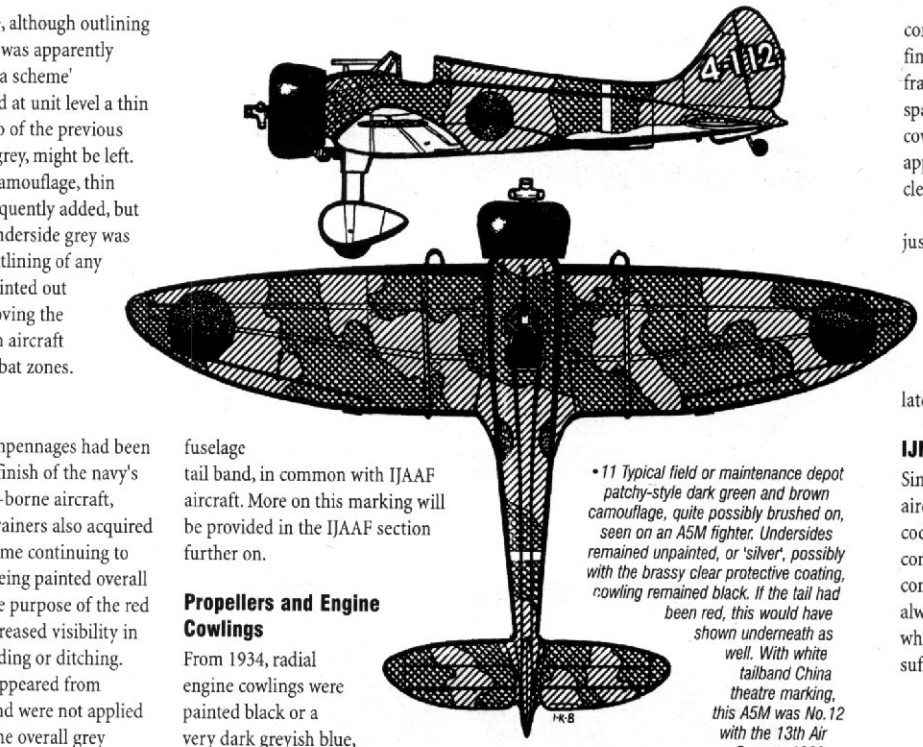
During 1933 red tail empennages had been added to the standard finish of the navy's land-based and carrier-borne aircraft, except trainers. Then trainers also acquired the red tails in 1935, some continuing to wear them even after being painted overall red-orange in 1939. The purpose of the red tails was to provide increased visibility in the case of a forced landing or ditching. Red tails normally disappeared from camouflaged aircraft and were not applied to new types wearing the overall grey scheme.

Drift Indicator Markings

Single-engined two and three seat bombers, reconnaissance and patrol aircraft that were required to range across wide tracts of ocean had to rely solely upon accurate on-board navigation using what today would seem to be the most rudimentary of tools. These aircraft were to be seen marked with radiating lines across their tailplanes. If projected inward, these lines might be found to converge at a navigator's sighting point in the rear cockpit. In order to check for drift caused by crosswinds when out of sight of land, a dye bomb (or possibly a smoke bomb) could be dropped on to the water below and then a sighting taken, using these lines, as the marker receded. The lines normally radiated to provide 5-degree intervals.

White Fuselage Tail Bands

In the later thirties IJNAF aircraft tasked with operational theatre roles (bombers, fighters, ground support, reconnaissance) came to be marked with a white fuselage tail band, in common with IJAAF aircraft. More on this marking will be provided in the IJAAF section further on.



• 11 Typical field or maintenance depot patchy-style dark green and brown camouflage, quite possibly brushed on, seen on an A5M fighter. Undersides remained unpainted, or 'silver', possibly with the brassy clear protective coating, cowling remained black. If the tail had been red, this would have shown underneath as well. With white tailband China theatre marking, this A5M was No.12 with the 13th Air Group c.1938.

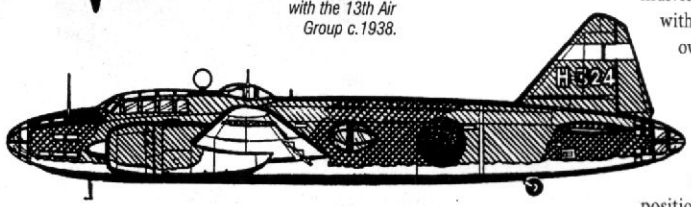
Propellers and Engine Cowlings

From 1934, radial engine cowlings were painted black or a very dark greyish blue, what might perhaps be described as 'charcoal navy'. (The IJNAF had largely turned away from liquid-cooled engines, and the cowlings of those remaining aircraft powered by in-line engines were not painted black).

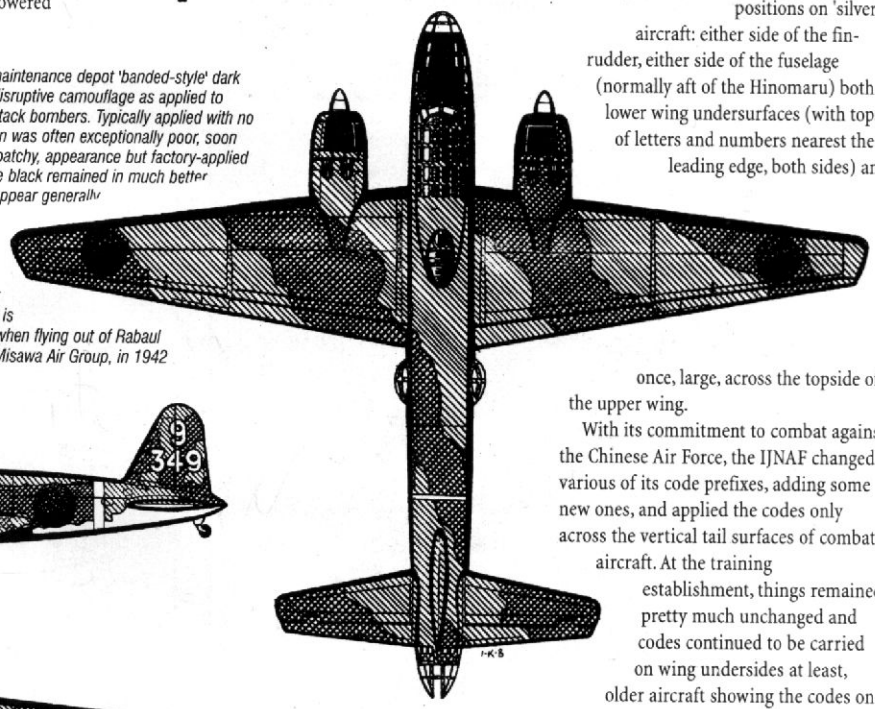
Japanese aero engines suffered endlessly from oil leaks so oil-coated engines, cowlings and adjacent areas were usual. It has been reported that a group of Japanese mechanics could scarcely believe their eyes when confronted with the relatively oil-free engine bays of some captured US aircraft early in the Pacific war! The semi-gloss black, or blue-black, paint of those engine cowlings has in the past sometimes been referred to as an anti-glare finish. Rather, it surely comprised what might be termed a 'tidy finish'. IJNAF aircraft were, in those less fraught times, maintained in spic-and-span condition, slick black-painted engine cowlings never compromised a 'ship-shape; appearance, nor demanded endless cleaning and polishing.

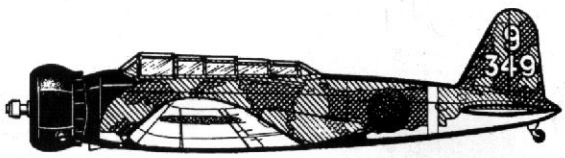
Wooded propellers were varnished, just like most wooded props anywhere.

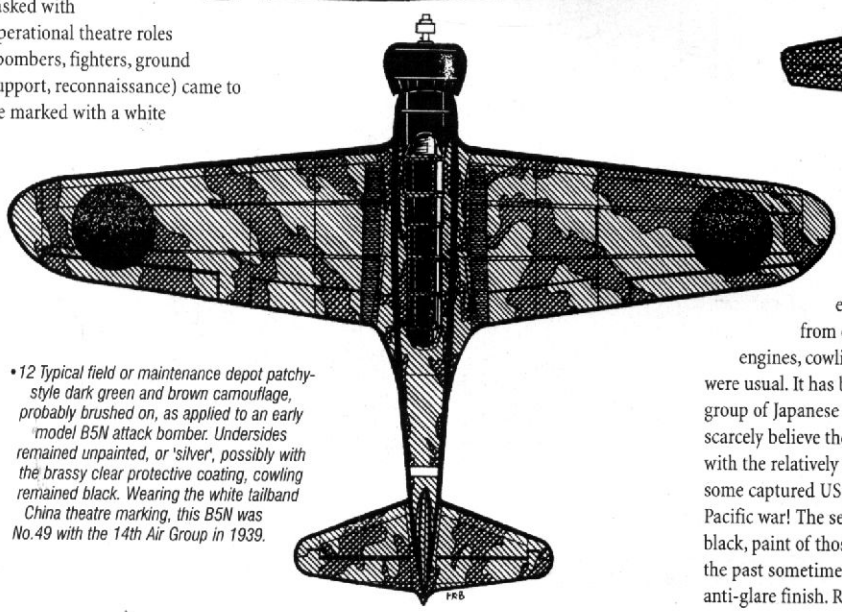
Metal propeller blades' front faces were unpainted except for a pair of thin red bands applied close to the tips. Rear faces were given a dark non-glossy anti-glare finish of black, later red-brown.



• 13 Typical field or maintenance depot 'banded-style' dark green and brown disruptive camouflage as applied to numerous early G4M attack bombers. Typically applied with no primer, paint adhesion was often exceptionally poor, soon creating an extremely patchy, appearance but factory-applied Hinomaru and anti-glare black remained in much better condition. Undersides appear generally to have remained unpainted. Still wearing its narrow white China theatre tailband from an earlier assignment, this G4M is shown as it appeared when flying out of Rabaul as No.24 with the Misawa Air Group, in 1942







• 12 Typical field or maintenance depot patchy-style dark green and brown camouflage, probably brushed on, as applied to an early model B5N attack bomber. Undersides remained unpainted, or 'silver', possibly with the brassy clear protective coating, cowling remained black. Wearing the white tailband China theatre marking, this B5N was No.49 with the 14th Air Group in 1939.

IJNAF Aircraft Coding

Since the earliest days all IJNAF service aircraft had been clearly marked with codes. These codes mostly consisted of two components: a prefix and a suffix connected by a hyphen. The code's prefix always identified the base, ship or unit to which that aircraft had been assigned. The suffix indicated the aircraft's role or mission, and gave each individual aircraft within a unit its own number. Codes were at first generally worn in seven positions on 'silver' aircraft: either side of the fin-rudder, either side of the fuselage (normally aft of the Hinomaru) both lower wing undersurfaces (with tops of letters and numbers nearest the leading edge, both sides) and once, large, across the topside of the upper wing.

With its commitment to combat against the Chinese Air Force, the IJNAF changed various of its code prefixes, adding some new ones, and applied the codes only across the vertical tail surfaces of combat aircraft. At the training establishment, things remained pretty much unchanged and codes continued to be carried on wing undersides at least, older aircraft showing the codes on all surfaces as before, until they were retired or repainted.

Dan K. Baker

Next Instalment

Part 2 of this series will cover the colours and markings of Army aircraft of the 1937-1942 period.

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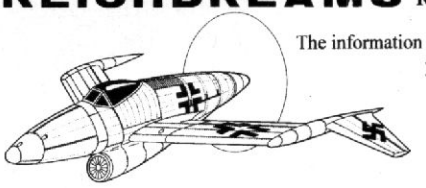

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Meteor T.7 into a PR.10

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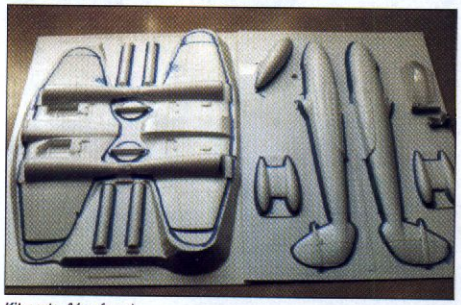
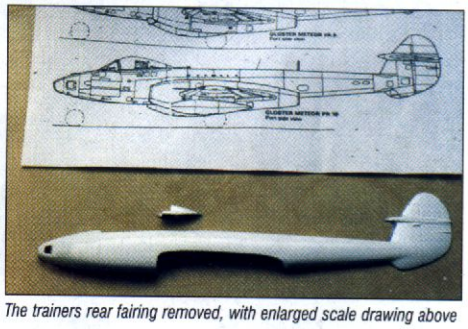


Kit parts (Vac-form)

Kit parts (resin, plastic and white metal), instruction and decal sheets



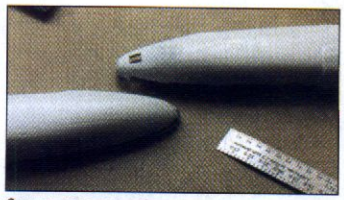
The trainers rear fairing removed, with enlarged scale drawing above

Aerial Reconnaissance was military aviation's raison d'etre. From the very early days of balloons to today's highly sophisticated aircraft and satellites, armed forces have had, and still have, a desire to peep over their (not so friendly in most cases!) neighbour's fence. Throughout the history of aviation most types of aircraft have lent themselves to a camera installation, or other more sinister sensors of some sort or other. The subject of this article is a typical example of the RAF using an existing aircraft and amending its design for their Photo Reconnaissance requirements, the Meteor PR.10.

The PR.10 was the last single seater Meteor, and was developed simultaneously with the Meteor FR.9 (itself a derivative of the F.8). Given the type number G.41M by Glosters, it was intended for high altitude strategic reconnaissance. In many ways it appeared as a "hotch potch" of other Meteor marks, being fitted with the long span wings (44' 3") of the F.1/F.3, the F.4/T.7 tail unit, the F.8 middle section and the FR.9's nose camera installation. Additional cameras were installed in the rear fuselage; this and the T.7 (apart from the various "hybrids") were the only Meteors not to feature offensive armament.

Only 59 PR.10s were produced for the RAF and these were operated by Nos. 2, 13, 81 and 541 Sqns. They entered service during 1951/2 and replaced such venerable PR types as the Spitfire PR.XIX and Mosquito PR.34. They themselves were eventually replaced by Canberra's PR.3/7s or Hunter FR.10s.

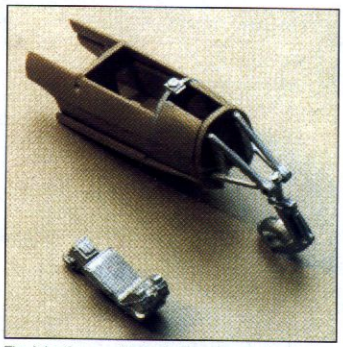
Previously the only 1/48th Meteors available were an F.1 issued by AMT and a Pamela Veal Vac-formed F.8. These are probably collectors' items, by now so Aeroclub's timely release of their T.7 and F.8 was more than welcome. A further addition to the range has come in the form of an F.3 and an F.4, and a series of Meteor night fighters (The NF.14 will be Very welcomed, by half a dozen like-minded souls at my model club, as well as me!) are also planned by Aeroclub.



Camera nose opened

These kits are classed as "mixed-media", and feature white metal, moulded plastic and resin parts. With Tamiya's injection moulded F.1, it is pleasing to reflect that at last, the Grandaddy of today's jet fighters, the Meteor, is now being acknowledged by the modelling industry.

I actually purchased Aeroclub's Meteor T.7 at the same time as the same company's Lightning T.4/5. Comparing the two, it is obvious that the Meteor's mouldings are much crisper than that of their earlier Lightning. Their depiction of the panel lines for example, are in part quite exquisite. As a fan of PR type aircraft I had long wanted a Meteor PR.10 to add to my collection, so in the unlikelihood that such a model would be produced, a little kit-bashing was required. The fact that the PR.10 did feature various components, common to other Meteors, meant that I could have cross-kitted the T.7 and F.8 to produce my PR.10. This probably would have been easier, although more expensive, than the route I took. At least one benefit would have been that there were enough 'left-overs' to build one of the hybrid Meteors. As the camera nose would have had to be scratch built and the wings extended whichever means were used, I opted for the cheaper method of converting the standard T.7. This meant that as well as the amendments to the wing tips and camera-nose, the two-seat fitment would need changing to a single seater. Aeroclub kindly sent me a couple of their F.8 canopies in exchange for a few postage stamps, a bargain!, and I had an ejection seat left over from their Vampire kit. In order to achieve the greatest amount of accuracy possible, 1/72nd scale plans, drawn by the late Mike Keep and published in Aviation News some years ago were enlarged, by 150% on the photocopier. Incidentally, I have to say that recent 1/48th drawings in Scale Models of the Meteor were misleading; the T.7's fuselage was depicted too short as was the wing span of the F.1/3, so if referring to these drawings be wary!.

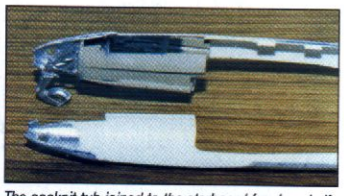


The injection moulded plastic and metal cockpit tub & nose gear assembly, with ejection seat in the foreground

Aeroclub's kit features two large vacuum formed sheets, one with the fuselage halves, the other with the wings, and a host of white metal parts and two resin intakes. As always it pays dividends to read through the instructions. Aeroclub's instructions are generic for both their F.8 and T.7, and while being very concise do need a lot of studying before any construction commences.

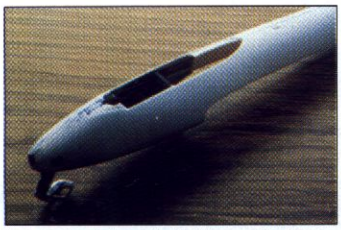
Stage One - Preparation

The success of any vac-formed model is dependant on the initial preparation. Parts inaccurately removed from the backing sheet would prove difficult to fit and cause further problems later. In order to obtain the most accurate removal possible, an indelible ink marker was used to draw around the moulded parts. Each individual item was then removed by cutting out with scissors, leaving a few millimetres of plastic. A scalpel was then used to repeatedly score around each part, and the surplus plastic carefully snapped off.

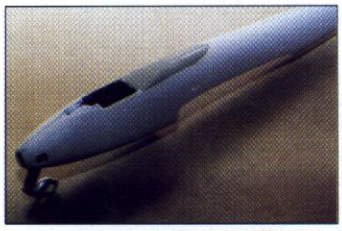


The cockpit tub joined to the starboard fuselage half. Of note are the added tabs, to aid alignment, and the large aperture in which the wing saddle will fit

Conventional means of dealing with the remaining plastic is to tape a large sheet of wet'n'dry paper to the work surface and to sand the part down. I have never found this method too successful. The end result usually means too much plastic removed at the edges with insufficient in the middle. I scrape the



Both fuselage halves joined, with one side of the plastic "blanking" added to the rear cockpit aperture



The rear canopy aperture filled with Milliput and sanded smooth

surplus plastic off with a scalpel blade (making sure that the vacuum's handy!) with small pieces of wet'n'dry used to clean the edges up. The pre-applied indelible ink acts as a guideline and helps ensure that too much plastic is not removed. Special care was needed on the wings due to the shape of the rear engine nacelles and the dihedral built in.

Fuselage Modifications

With the fuselage halves removed from the backing sheet attention turned to the first of the modifications required, the PR nose. This was achieved in two stages: the first was to form the two nose mounted oblique camera ports. 'Flats' were sanded on the side of each nose cone. Despite a fair amount of plastic being removed, the thickness of the plastic was sufficient to ensure I didn't sand right through. The camera ports were then cut out after studying as many photos and diagrams that could be mustered from my references. The next stage was to remove the T.7's rear canopy fairing by scoring with my scalpel and snapping the unwanted plastic off. Aeroclub supply injection moulded parts for the cockpit and fortunately enough their side panels and floor are common to both their T.7 and F.8. The rear bulkhead required triangular inserts on which the ejection seat would rest, these were manufactured from plastic card.

With the cockpit painted and detailed the sub-assembly, including the white metal nose gear, which is housed on the cockpit's forward bulkhead, was added to the starboard fuselage shell. The camera ports in the nose were glazed internally with clear plastic card, this being carefully superglued into position. This would form the base for the later application of Krystal Klear, applied externally. Small tabs were used to assist correct alignment of the fuselage halves. With the port side of the fuselage added, plastic card was applied internally through the wing saddle's aperture to cover the gap where the rear seat was. Milliput was then used to "pad out" the gap left in the upper decking as a result of the earlier removal of the trainer's rear position and fairing.

With the fuselage (more or less) finished attention turned to the wings.

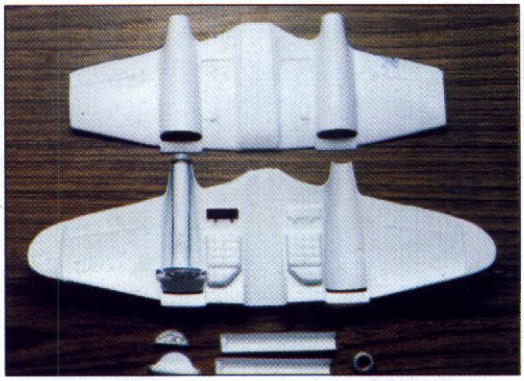
Wings

The wings come in upper and lower halves, the former featuring the saddle on which the fuselage sits and the latter featuring the profiled lower fuselage curve. Removal of plastic followed the methods used for the fuselage, only this time, in order to form the basis of the extended wing tips of this variant, extra plastic was left on the lower wings, slightly larger than the actual profile of the T.7 wing, the upper wing having each wing tip removed. The engine parts, featuring vac-formed pipes and front fascia, with white metal engine faces and exhausts were prepared and added to the lower wing. The kit features separate airbrakes. I had initially intended to portray these open (I decided later not to!). In order to achieve this some cleaning up of the recesses for the airbrakes were required as they were a little too rounded, due no doubt to the moulding process. The bays were therefore removed and replaced by plastic card, with the sidewalls having thinner card used to 'square them off'. The 'slotted piano-keys' were added by strips of plastic card. The airbrakes themselves are supplied in white metal and are the kit's Achilles Heel. Certainly these were the only parts that I could find fault with (It seems manufacturers are having a little bit of trouble with the Meteor's airbrakes of late!). The slots in each one were very poorly formed, so I attempted to clean these up, but with little success, finding it nigh on impossible to get each piece's seven slots of a uniform shape. I therefore eventually fitted these in the closed position, placed on top of a blob of Milliput, which filled the recesses manufactured earlier. The upper half of the wing was added to the lower half with small pieces of plastic card used to fill the inevitable gaps. A late application of filler, a combination of Superglue, Milliput and Green Stuff sorted the remaining gaps out.

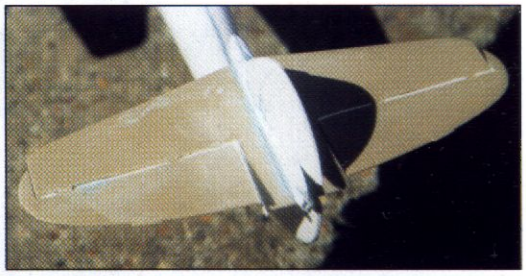
With the wings built the resin engine intakes were added. The intakes caused me some confusion, in that the later Meteors had two distinct sizes of front aperture. From my enlarged scale drawings I would suggest that the kit items are of the larger diameter. As most PR.10s featured the larger ones I therefore added mine unamended, there's a 50/50 chance that they're right, I suppose! Plastic card and Milliput were used to pad out the wing extensions and were later sanded to profile, again using the diagrams as reference. Wing tip slots were opened to take the navigation lights which were formed from sections of green and red coloured toothrushes. The aileron hinge lines were then extended, as were the various panel lines on the wing tips.

Nose and Cockpit

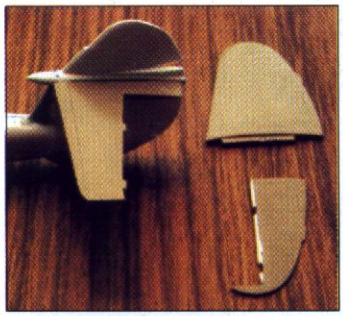
The second stage of the nose camera installation was now tackled. A rummage through my spares box revealed a small section of suitably sized drop tank which was superglued into the aperture in the nose. Milliput was then plastered on to form the correct shape. When dry and sanded to profile, the forward pointing camera aperture was then opened up. This would be glazed later with Krystal Klear. The triangular runner, at the rear of the hood was made from plastic card as were the side guide-rails. Aeroclub's F.8 actually have these in the kit, but, rightly so as the canopy opened sideways, not in the T.7 though. As I didn't have the nerve to ask Mr. Adams for a pair, I manufactured mine from plastic card and rod. The PR.10's camera control gear was situated where the F.8's gunsight was. I had no real reference to what this gear looked like so the kit's gunsight, moulded integrally to the pilot's instrument panel, was used. I must therefore apologise to the purists, and those who do know what it should look like! As I had decided to feature my Meteor with the canopy open, the windscreen and hood was separated, very carefully (!) after using masking tape to mark where the cut would be made. A scalpel was then used to scribe the line repeatedly. With the windscreen in place, the under fuselage belly tank was added with the slots for the wing tanks opened up. The white metal undercarriage units were also added. My



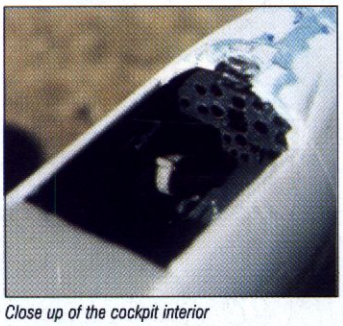
The lower wing has had one set of engine parts made up, with the other set below. Note the extended wing tips on the lower set



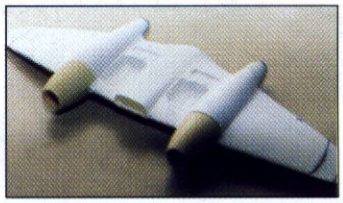
The remodelled tail unit



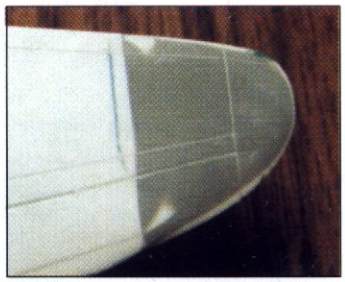
The kit's plastic tailplanes. The elevators will be added slightly deflected at a later stage. Note the reconstitution of the hinge line, from plastic card



Close up of the cockpit interior



The wings have been built with the resin intakes added (lower view)



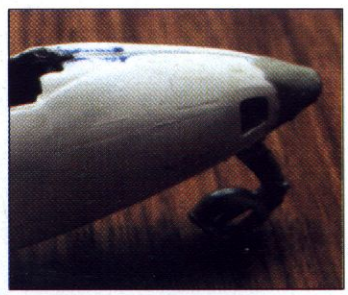
Milliput has been added to the wing extension and the aileron and panel lines have been re-scribed

Tail Unit

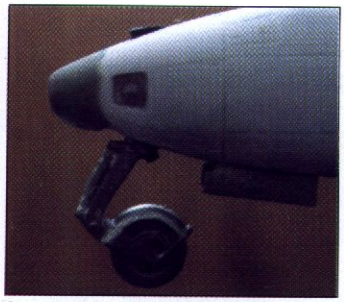
I decided that a little more interest would be added by portraying the rudder and elevators slightly displaced. A series of scribed lines were used to carefully score through the vac-formed plastic of the rudder. With the rudder removed, plastic card was used to 'seal' the void to the interior of the rudder. The rudder was now sanded to shape and re-fitted to the fin. The elevators were removed from the tailplanes, this being a fairly straightforward task but requiring a re-constitution of the hinge line, which was built up from plastic card, with cut-outs for the hinges themselves. Both tailplanes were added now, but the elevators were installed later.

Fuselage/Wings

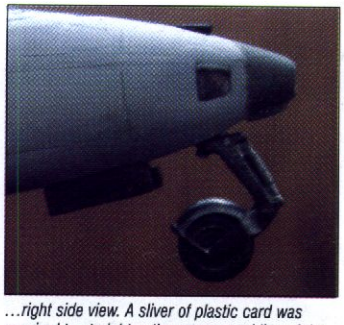
With sufficient work completed on both the wings and the fuselage, it was now time to join them together. A few dry fits were required and unfortunately the under side of the wing section didn't quite match the nose section. I therefore added some plastic internally, the filler would need something to sit on anyway!



Stage two of the camera nose modification, the new profiled nose has been extended from a section of drop tank and Milliput



Stage three of the nose mod. Now filed to shape with the small intake scoop added, left side view...



...right side view. A sliver of plastic card was required to straighten the upper panel line of the camera aperture

Meteor was taking shape, however the tail appeared to sit too high in relation to the nose, so the main legs were carefully removed, the undercarriage bay had two slots in each bay opened and the legs reinstalled. This improved the sit a great deal.

Painting

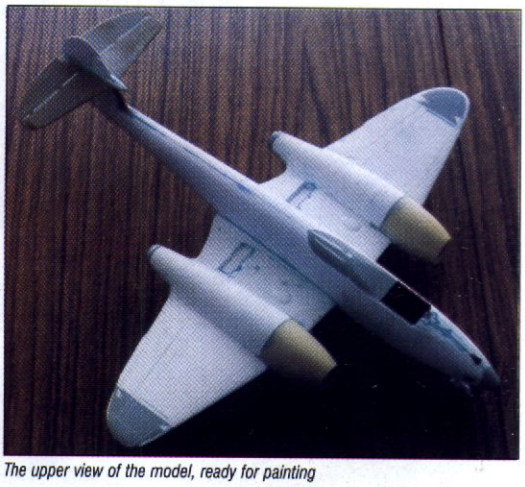
I had decided to finish my model in Medium Sea Grey and PRU (or Cerulean) Blue, both colours being available from the Xtracolour range. My PR.10 would be VS975 of No. 541 Squadron based at RAF Benson in 1957. I had a couple of photos of this aircraft, one in Bryan Philpott's 1986 booked titled aptly enough 'Meteor', which I borrowed from my local Library. (I am not looking forward to taking this book back, I've had it for a few months now, oh the fine will be horrendous!). It was from this photo and a line drawing in a recent edition of Scale Aircraft Modelling, that I decided just where the demarcation line of the grey and blue would go. An initial coat of light grey was sprayed on and the inevitable imperfections dealt with. With the real colours applied a coat of Johnson's Klear floor polish was added to protect the paintwork whilst handling the model during the detailing and decalling stage. I also painted the nose gear in PRU Blue. I'm not 100% sure that this was so on this particular aircraft, but I have seen a colour photo of a U.16 target tug in its 'Blood and Custard' scheme and this had its nose gear in red (and it would seem, the main undercarriage) so I thought why not!!

Decals

The kit's roundels and fin flashes were used. I suspect that in this colour scheme the wing-walk stripes may have been in white, although the kits feature them in black (which is of course correct for the "Vintage Pair's T.7 featured in that kit). I used those in the kit and if I find suitable photographic evidence to support my suspicions, I will simply overlay the black ones with white decal stripes.

Serials and codes (A•N starboard, N•A port) were from various Modeldecal sheets, using more Klear to act as a bedding agent. The ejection seat warning triangles came from the spares box. With all decalling complete a coat of semi-gloss varnish was applied to give the aircraft a nice proto-typical sheen.

Ready for painting. This view of the lower fuselage shows the rear mounted camera bays have been opened

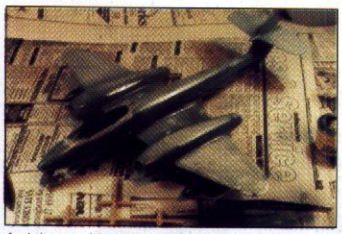


The upper view of the model, ready for painting

Details

The ejection seat, surplus from Aeroclub's Vampire, was detailed with Milliput, for the parachute pack, and strips of brown paper from an envelope for the harnesses. Buckles were from slivers of silver foil, the ejection seat firing handle from yellow and black painted fuse wire. Some earlier Meteor ejection seats appeared in a silver scheme, but from the aforementioned photos VS975 would appear to have had a darker seat, so I've painted mine in black. With the seat added attention turned to the hood. The Meteor's sliding hood featured a 'solid' lower sliding section; very similar to the F-84 and the F-86 Sabre. I had no real idea of the detail on the Meteor, although judging from photos it would not seem to be as extravagantly detailed as the US types. A base was constructed from plastic card using the canopy as a template with Milliput and the sparse detail added. This was painted semi-matt black and fixed in the open position on the rear decking. The clear hood was then added, using Krystal Klear as adhesive. Camera ports were glazed with more Klear. Further details, in the form of fuse wire and rod aerials, were superglued into pre-drilled holes, and the pre-painted undercarriage doors added along with the pre-painted and decalled drop tanks. The pilot's access foot step was added from rod and installed in a slot. A further coat of semi-gloss varnish finished the model off.

The undersides were painted PRU Blue



And the topside, shown here awaiting masking, will be Medium Sea Grey

Conclusion

Occasionally, my modelling expectations outweigh the end result! Some 'conversions' tend to not only stretch one's skills (which it did) but one's patience as well (which it didn't, apart from the airbrakes, definitely a case for etched brass!). I thoroughly enjoyed this exercise, in that it was not so much of a conversion really, but certainly sufficient enough to provide something different. Anyone not wishing to go the 'whole-hog' could just change the nose on the standard F.8 to produce the FR.9, either by using the methods used here or moulding their own. If Aeroclub's NF.14 is not due soon I think I may treat myself to an F.4 or F.8 converted into a U.15 or 16 Target Drone in its high visibility "Blood and Custard" scheme. This will look rather nice, methinks, next to my blue and grey PR.10.

My thanks to Glosters, for manufacturing the Meteor in the first place: Aeroclub for taking the plunge in reproducing it (and for doing it so well) and for following this series up with the Meteor night fighters (you may have guessed I'm looking forward to the NF.14) and for supplying the canopy to make this model possible (wouldn't a Canberra PR.9 look nice in this scale!)

Either straight from the box or converted I can highly recommend Aeroclub's series of Meteors and they would indeed make a suitable introduction to vac-form modelling and no offence to Tamiya but, "Nyaa Na Na Nyaa Nyaa"!

Bill Clark

Painted and decalled, with the windscreen and sliding portion added. The access step is under construction

The completed model

Photo Album: North American Harvard

by Mark Attrill

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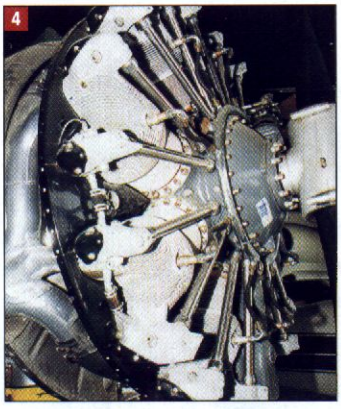
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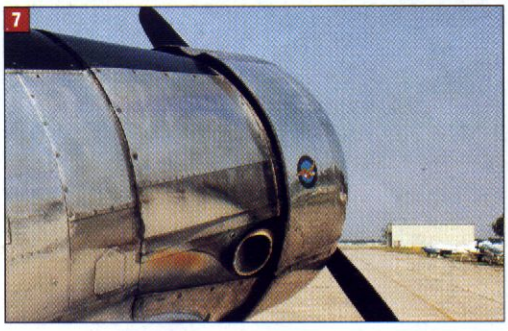
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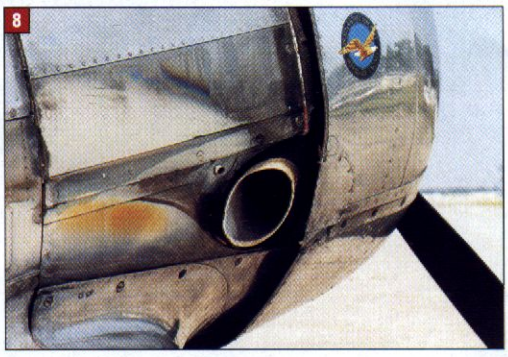
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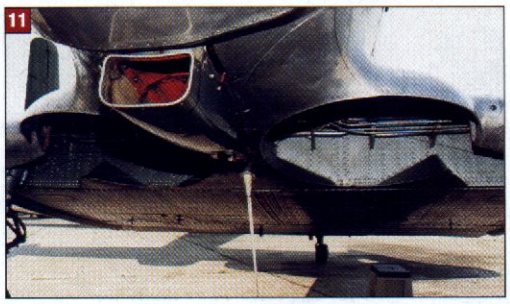
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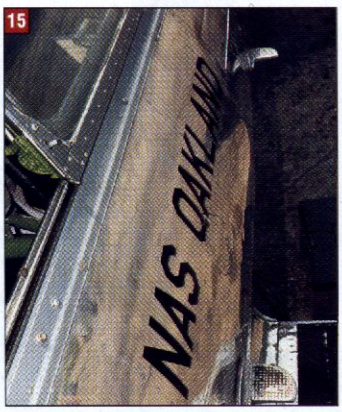

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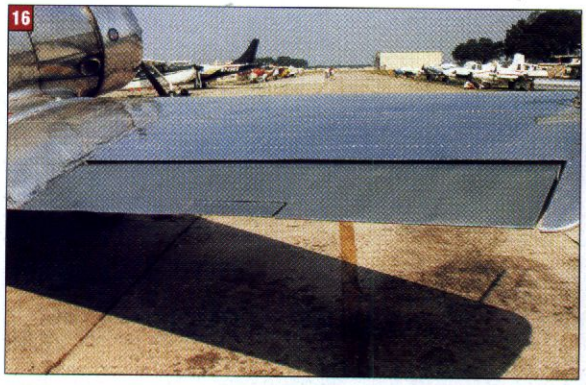

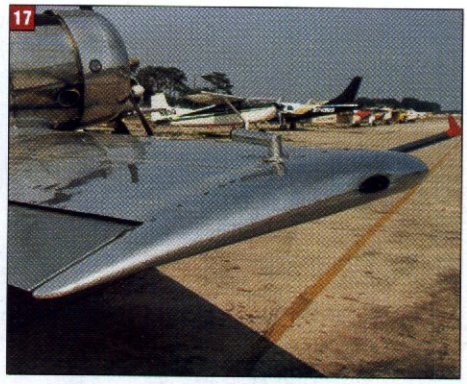

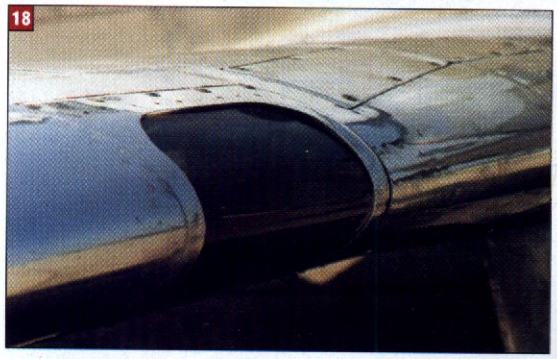

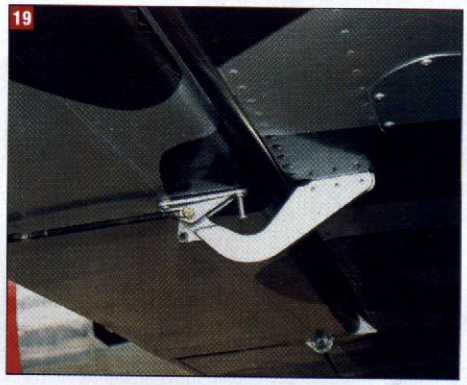

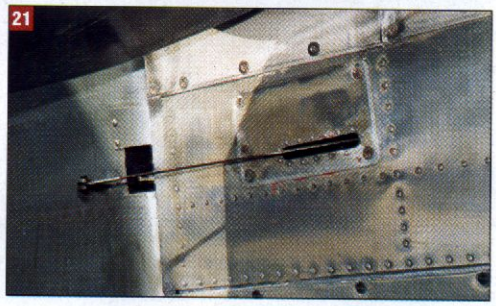

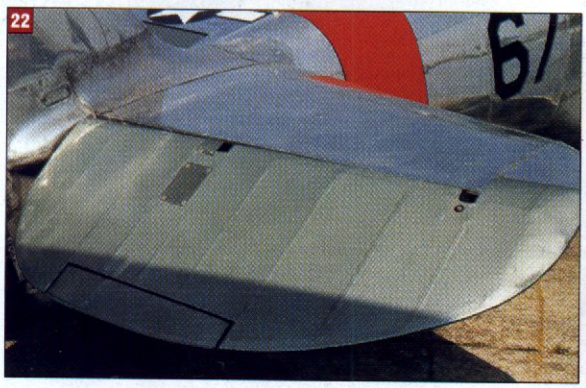

Author's Notes:

All photographs by the author unless otherwise stated. The author would like to thank Katie Jones and Tom Reilly of the Flying Tigers Warbirds Restoration Museum and School and Thom Richard and Graham Meise of Warbird Adventures Inc for their superb assistance in the completion of this Photo Album feature. Aviation enthusiasts and modellers visiting Orlando would find a visit to the Flying Tigers Museum at nearby Kissimmee a very rewarding experience. Warbird Adventures Inc, who own the SNJ-6 Texan that is the main subject of this feature, operate alongside the Museum and offer a wide range of air experience flights, including sightseeing tours and aerobatics to the general public.

Further details can be obtained from Tom or Graham. Tel: (813) 788 2058, Fax (813) 783 6450 Warbird Adventures Inc, 39132 CR 54 East, Suite 2070, Zephyrhills, Florida 33540, USA

Airframe

● **1** General view of Warbird Adventures' beautifully maintained North American SNJ-6 (T-6) Texan N9809C. SNJ-6 was the designation given to 931 AT-6F Texans which were diverted from service with the United States Army Air Force to the US Navy in 1945. N9809C was delivered to NAS Pensacola and spent most of its operational life as an instrument trainer in Florida before being placed in storage in 1956.

● **2** The Hamilton Standard two bladed variable pitch propeller fitted to SNJ-6 N9809C.

● **3** Close-up shot of the propeller hub and Pratt & Whitney R-1340-49 Wasp nine cylinder radial engine which gave the T-6 such a distinctive sound in flight. The cylindrical hub houses the propeller pitch change mechanism. The round component at right angles to the hub is one of the feathering bobweights.

● **4** This Photograph of a rather shiny Pratt & Witney R-1340-49 Wasp engine, fitted to a T-6 Texan currently undergoing major restoration, provides the modeller with some excellent reference material.

● **5&6** These two shots provide some useful detail on the propeller and spinner fitted to a North American Harvard in Royal Canadian Air Force markings. A number of Texan and Harvard variants were retrofitted with propeller spinners whilst in service.

● **7** View of the engine cowling and single exhaust from behind. The upper engine cowling panels are removable.

● **8** Close-up shot of the single exhaust that protrudes from the starboard side of the fuselage. Note the scorch marks around the exhaust which are normally more pronounced on aircraft with camouflage or paint schemes.

● **9&10** These two close up shots provide useful detail on the prominent filtered air intake that is located on the port side of the engine cowling.

● **11** Underside of forward fuselage. Note the carburettor air intake duct and the non standard communications whip aerial which is white.

● **12** The distinctive cockpit canopy on the SNJ-6 Texan seen here in the open position on the ground. Note the pattern and style of framing. The fixed rear portion of the canopy is unusual; on most T-6s this also featured heavy framing so you should check your references.

● **13** This view of the port rear fuselage and the cockpit canopy provides some useful detail on the shape of the canopy. The red handle at bottom centre of this view is the access handle for the baggage compartment.

● **14** The forward student/solo pilot's canopy in the open position.

● **15** Looking down the port side of the fuselage. Note the two cockpit access steps which appear on this side of the fuselage only.

● **16** Trailing edge of the outer mainplane showing aileron detail.

● **17** This view shows the shape of the wingtip and the position of the navigation lights. The tubular fairing mounted on top of the outer wing is definitely non-standard. It houses a miniature video lens for in-flight filming.

● **18** One of the most distinctive features of the Texan/Harvard family is the presence of two large landing lights in the leading edges of the mainplane.

● **19** This close-up photograph shows the size and shape of the tab control rod on the underside of the mainplane.

● **20** Close up of the rear fuselage and tailwheel assembly.

● **21** This photograph shows the point of entry for the flying control cables for the rudder.

● **22** Close-up photograph of the starboard tailplane and elevator. The large elevator tab is noteworthy.

● **23&24** Two close-up photographs of the rudder assembly. Unlike most of the airframe which is polished natural metal, the rudder and tailplane moving surfaces are finished in a gloss dark grey colour on N9809C. Note the rudder tab and the navigation light fairing mounted above the serial number.

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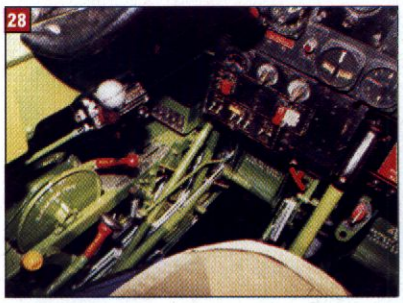
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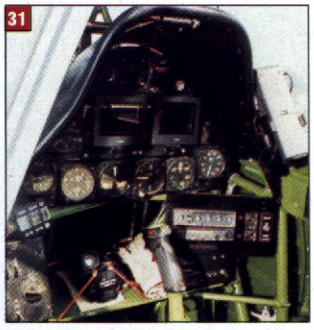
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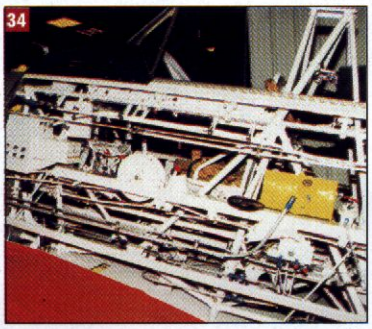
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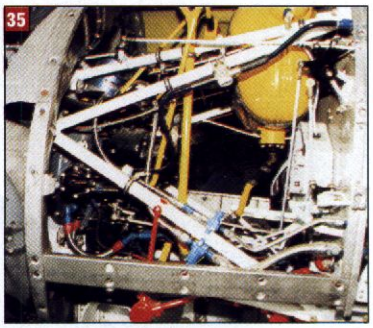
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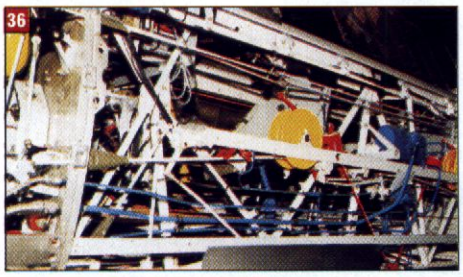
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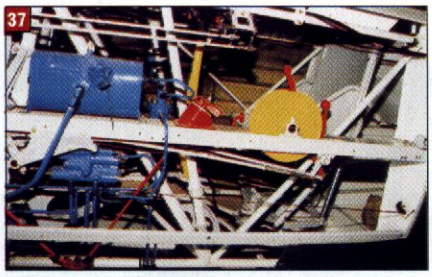
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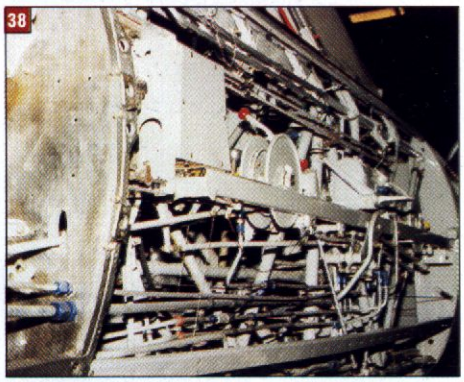
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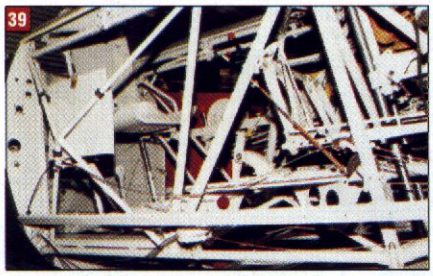
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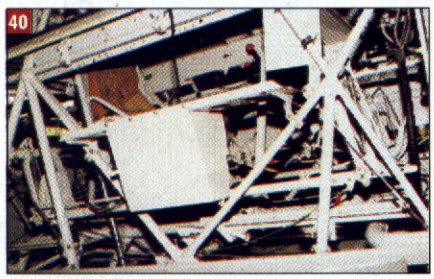
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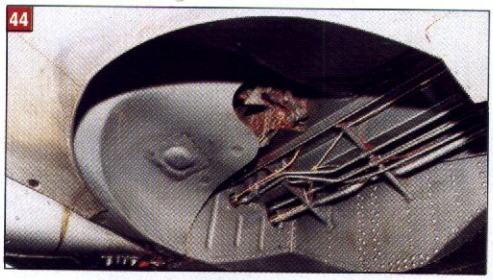
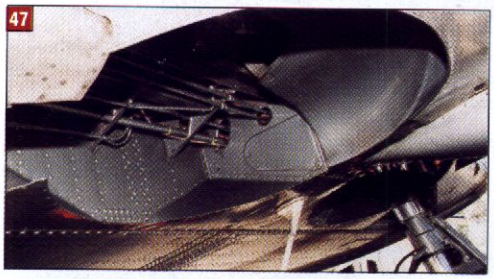
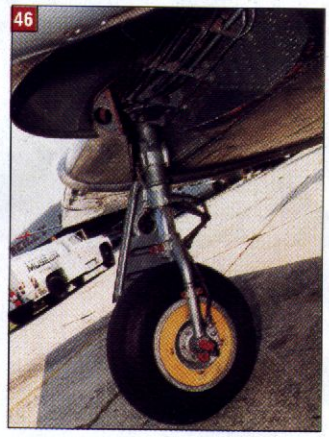
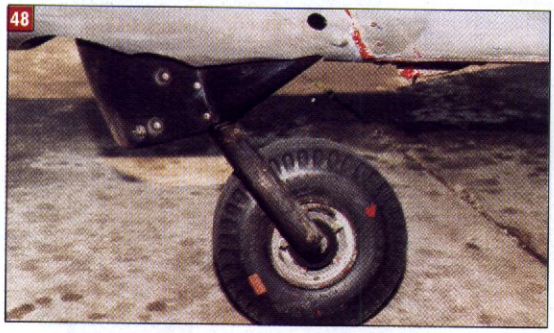








Cockpit

● **25** This photograph clearly illustrates the shape of the student/solo pilot's cockpit and windscreen. Note the shape of the cockpit coaming and the non-standard rear view mirror fitted to the right hand windscreen frame.

● **26&27** The simple but functional instrument panel in the front cockpit of N9808C is in original condition, barring one or two minor instruments, and therefore provides a very useful reference for modellers. The cockpit is finished in the original ANA 611 Interior Green colour.

● **28** Left hand side of the front cockpit. The elevator trim, engine throttle and undercarriage levers, all distinguished by red handles or knobs, are prominent features of the left hand console.

● **29** View of the rather basic pilot's seat in the front cockpit with interior cockpit framing detail. Note the shape of the triangular rollover protection frame and the light brown colour of the pilot's safety harness draped behind the seat back.

● **30** Pilot's canopy in open position showing position and shape of framing.

● **31** The rear cockpit, which would normally be occupied by the instructor has clearly been the subject of much modification in N9809C with the installation of modern radios and navigation systems. Modellers will, therefore, have to check their references very carefully for further details. Note the rather large and prominent rudder pedals which feature a large rendition of the North American logo and warning lettering in white.

● **32** View of the right hand side of the rear, instructor's cockpit. Note the interior structural tubing in this photograph.

● **33** Rear cockpit area looking backwards. Note the lack of framing on the rear, fixed, part of the cockpit canopy.

● **34–40** These seven photographs cover two T-6 Texans currently undergoing major restoration at the Flying Tigers Warbird Restoration Museum in Kissimmee, Florida. They provide some very useful and detailed information on the internal fuselage structure and major components that make up the Texan/Harvard cockpit. Modellers should note that the structure is painted light grey gloss and that major cockpit components have been colour coded to comply with FAA regulations on restoration. The original cockpit colours would have been matt Interior Green.

Undercarriage

● **41** Port main undercarriage leg/wheel. Note the tyre tread pattern.

● **42** Close-up of the port mainwheel on restored T-6 Texan showing the alternative, diamond treaded tyre fitted to some aircraft.

● **43** Forward view of port main undercarriage. The air intake in the wing leading edge feeds the cockpit heating system.

● **44** Port main undercarriage bay providing useful detail on the undercarriage locking mechanism.

● **45** Outer view of starboard main undercarriage door and wheel.

● **46** Inner view of the starboard main undercarriage leg and wheel. Note the pattern on the inner face of the undercarriage door.

● **47** Starboard main undercarriage bay. Note the shape and position of the non standard white whip aerial.

● **48&49** Close up of the tailwheel and fairing which is a rudimentary affair on the T-6 Texan/Harvard. The tailwheel does not retract and modellers should note that it tends to toe inwards when the aircraft is parked.

General

● **50** This rather unique shot, taken from a wingtip camera is included primarily to show the position of the cockpit canopies when the SNJ-6 Texan is in flight on a hot day!

● **51** USAF T-6 Texan 493382/TA-382 resplendent in an attractive all yellow colour scheme currently resides at the Valiant Air Command Museum in Florida. Note the large black aerial fairing above the fuselage and that this particular aircraft has a spinner fitted.

● **52** Licence built Noorduyn AT-16 Harvard IIB KF183 which has had a long service career with the Royal Air Force. The aircraft, photographed at a 50th Anniversary Meet for the T-6 Texan/Harvard at Middle Wallop in July 1988, is currently on the strength of the DTEO Boscombe Down.

● **53** Harvard IIB FS728 photographed getting airborne at Middle Wallop in 1996 carries RAF markings but is actually privately owned as G-BAFM.

● **54** The SNJ-3M was redesignated by the Flygvapnet as the Sk-16 and served in the training role. Some 257 SNJ-3s including this example with the civilian registration SE-FUZ but carrying typical Flyvapnet markings, were operated between 1947 and 1972.

● **55** This superbly maintained North American AT-6D/SNJ-5, photographed at Middle Wallop in July 1988, is carrying USAAF markings but is clearly on the French civil register as F-AZDU. Note the profusion of aerials on the upper and lower rear fuselage.

● **56** The North American Harvard III was retired from Royal New Zealand Air Force service in 1978 but several were maintained in flying condition by private individuals or groups including NZ1076/ENB photographed at RNZAF Ohakea in 1987.

Fairchild Aircraft 1926-1987

Fairchild Aircraft 1926-1987
by Kent A. Mitchell
Price: $33.95
Publisher: Narkiewicz/Thompson, 1331 South Birch Street, Santa Ana, California 92707
Tel: (714) 542 7145 Fax: (714) 542 1914
UK Source: Midland Counties Publications & The Aviation Bookshop

This title comes in an A4, landscape format with 184 pages and a laminated card cover. All of the content is black and white, except for the eight page colour insert and the card cover.

This title, as stated, deals with Fairchild aircraft of the 1926 to 1987 period, and these are dealt with in detail in chronological order. The types covered are:

- FC-1/1A, FC-2, FC-2C, XJQ-1/2, XRQ-1, Canadian Vickers FC-2/FC-2L/Model 51/A/B
- FC-2W, FC-2W1, FC-2W2 and Model 61
- Model 41. 41A & 42
- Model 71, 71A, 72 71E, F-1/C-8, XJ2Q-1 & XR2Q-1
- Model 71B, 71C, 71CM, 51/71, Super 71, Super 71P, 82A/B/D, 34-42 Niska and 45-80 Sekani
- FB-3, FT-1 and Model 21
- Model 100, American Pilgrim 100, 100A, 100B and Y1C-24
- Model 150, American Pilgrim 150 and General Aircraft GA-43
- Fairchild-Caminez engine, Model KR-31, KR-34 (Kreider-Reisner Challenger C-2/C-4), Model KR-21 (Challenger C-6)
- Model 22 C-7/C-7G, XR2K-1
- Model 24 C8-C8F, 24G-K, UC-61, A-K, Forwarder, UC-86, J2K-1/2, GK-1 & Argus I/II/III
- Model 95, XC-941 & XC-31
- Model 91, XA-942/-A/-B & Jungle Clipper
- Model 45, 45A, JK-1 & UC-88
- Model 46/46A & Clark/Duramold 46A
- Model 62, M-62A, PT-19/A/B, PT-26/A/B Cornell, M-62B, M-62C & PT-23/A/Model 84
- Model 77, XAT-13 Yankee Doodle, XAT-14 Bombardier & AT-21 Gunner
- Model 78, XC-82 & C-82A Packet
- Fairchild Canada F-11 & F-11-2 Husky
- Model 92, XNQ-1 & T-31
- Model F-47
- Model 105, 107, 110, 160, 203, 484, C-119A/B/C/F/G/J/K/R4Q Flying Boxcar, XC-120 Pack Plane & XC-119H Flying Van
- Model 205, C-123B/H/J Provider, Model 473 & C-123K
- Fairchild F-27 Friendship, Faichild Hiller Model 538 & FH-227
- Model 224-1 & VZ-5FA Fledgling
- PC-6 Porter, AU-23 & 23A Peacemaker
- Fairchild Republic YA-10/YA-10A/A-10A/A-10N/AW Thunderbolt II
- Fairchild Republic NGT/T-46A

Each one of these types is covered with clear photographs, and there are even a few plans of some. The latter section of the title deals with unpiloted aircraft, missiles, helicopters and sub-contracts. This includes the KAQ-1 Lark, SM-73 Goose, USD-5 Osprey missiles, FH-100 helicopter and sub-contract work such as the B-52, 707/720, 727, 737, 747 and 757 component work.

Overall, this is an excellent title and one which can be highly recommended to all.

Our thanks to Narkiewicz/Thompson for the review sample.

Martin Aircraft 1909-1960

Martin Aircraft 1909-1960
by John R. Breihan, Stan Piet and Roger S. Mason
Price: $33.95
Publisher: Narkiewicz/Thompson (address elsewhere)

Once again this is an A4 landscape format title, with 208 pages of contents and a laminated card cover. The bulk of the content is in black and white, but there is a four page colour insert.

As with the previous offering from this source, this title overs overall coverage of the following Martin designs:

- Early designs (1909 to 1913), Model T, Model TA, Model TT, Model S and Model R
- GMB, MB-1 & MB-2
- MO-1, M2O-1. MS-1 & N2M-1
- SC-1/2, T3M-1/2 & T4M-1
- XT5M-1, BM-1/2 & XT6M-1
- PM-1/2, XP2M-1/2 & P3M-1/2
- XB-907, B-10, B-12, B-14, Model 139W/166 & Model 146
- Model 130 China Clipper & Model 156
- PBM-1/5 Mariner
- Model 167, XA-22 and Maryland I/II
- XPB2M-1/1R & JRM-1/3 Mars
- B-26 Martian, B-26A-H Marauder, AT-23, TB-26 and JM-1/2
- Projects: XB-16, XB-27, XB-33 and Martin-build Boeing B-29
- Model 187, A-20 & Baltimore I - IV
- Model 2-0-2, Model 3-0-3 and Model 4-0-4
- XBTM-1 & AM-1/1Q Mauler
- P4M-1/1Q Mercator
- XB-48
- XB-51
- P5M-1/2 and P-5 Marlin
- B-57A-G Canberra
- P6M-1/2 Seamaster

Each type is covered with a good deal of clear photographs (some internal) and there are a number of scale plans included.

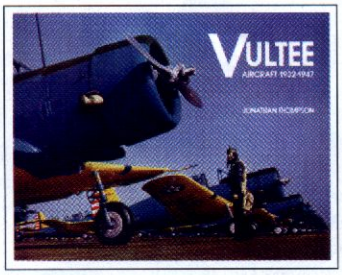
As with the previous title, the last section of this one offers details of missiles and electronics produced by Martin, along with the Marietta project and the Lockheed-Martin merger.

Another excellent title, and one we can highly recommend to all.

Our thanks to Narkiewicz/Thompson for the review sample.

Vultee Aircraft 1932-1947

Vultee Aircraft 1932-1947
by Jonathan Thompson
Price: $29.95
Publisher: Narkiewicz/Thompson (address elsewhere)



Once again this is an A4 landscape format title, although the page count in this title is reduced to 132. All of the content is in black and white and the laminated card cover is in colour.

As with the previous two titles, this one takes a look at all Vultee designs from 1932 to 1947 and these are:

- V-1/V-1AV-11
- A-19 & V-12
- Vultee 48, 61 and P-66 Vanguard
- Vultee 51, 54, Bt-13/15 & SNV Valiant
- Vultee 72, A-31 & A-35 Vengeance
- Vultee 84 & XP-54
- Vultee 90 & XA-41
- Vultee 102 & XP-81

Each of the types listed above is covered in both narrative and photographic form. The photographs are nice and clear and there are also scale plans and even extracts from flight manuals etc.

As I like the P-66, Vengeance and XP-54, this title is a real 'must' for me, but I can also highly recommend it to all with an interest in this manufacturer's products.

Our thanks to Narkiewicz/Thompson for the review sample.

North American Aircraft 1934-98

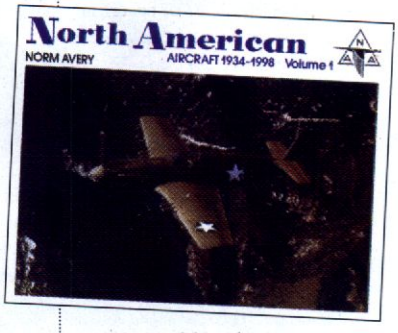
North American Aircraft 1934-98 Vol 1
by Norm Avery
Price: $35.95
Publisher: Narkiewicz/Thompson (address elsewhere)

This is the latest title from Narkiewicz/Thompson and it comes in their 'usual' A4 landscape format with 204 pages. Most of the content is in black and white, although there are ten pages of colour as an insert, and the laminated card cover is also in colour.

This first volume deals with the following types:

- General Aviation GA-15, XO-47, North American NA-25, NA-51 and O-47A/B
- NA-16/198, AT-6 - SNJ Texan
- NA-21, NA-39 & XB-21 Dragon
- NA-35 & Vega Model 35
- NA-40/40B, NA-62/108, B-25A/B/C/D/G/H/J, F-10, AT-24 and PBJ Mitchell
- NA-63, NA-67 & XB-28/A
- NA-73, NA-126, P-51/F-51 Mustang, F-6 and A-36 Invader
- North American production of the B-24 (NA-95) and C-82 (NA-135) at Kansas City and Dallas
- NA-120, NA-150, P-82/F-82 Twin Mustang
- NA-130/153 B-45 Tornado
- NA-134/141 FJ-1 Fury
- NA-140/256 P-86/F-86A/E/F/H/K F-86D Sabre & YF-93
- NA-179/251 FJ-2/3/4 Fury

Once again each type is well illustrated with both photographs and scale plans. The second part of this title will be produced in February and will cover all remaining North American types, as well as Rockwell and Boeing NAA.



This title simple goes into the 'should have it' category, as the clear photographs and excellent detail offered will be of value to both modeller and aviation historian alike.

Our thanks to Narkiewicz/Thompson for the review sample. Any worldwide distributors interested in the range should contact Narkiewicz/Thompson directly.

Messerschmitt Me 109 Cz.5

Messerschmitt Me 109 Cz.5 (Messerschmitt Bf 109 Part 5)
by Robert Michulec
Price: £TBA
Publisher: AJ-Press, P.O. Box 28, 80-305 Gdansk, Poland
Distributor: AJaKS, ul. Lubelska 30-32, 03-802 Warszawa, Poland
Tel/Fax: + 48 22 618 60 51
UK Source: Midland Counties Publications and Books International

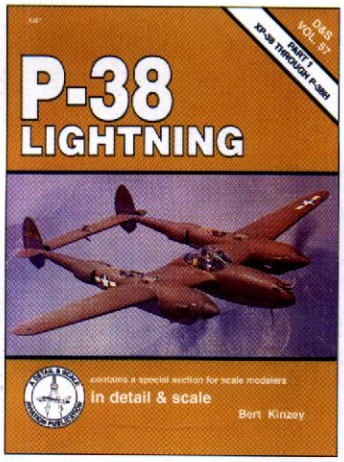
This is the fifth part of the 'Monografie Lotnicze' (Aircraft Monograph) on the Bf 109 and what an edition this is! It is in an A4 format, with a laminated card cover and no less than 120 pages of contents. All of the text and photo captions are in Polish but the mass of photographs that illustrate each chapter are very interesting. The narrative covers the type from the early B variants in the Spanish Civil War right through to the end of WWII. The latter few pages even include a number of post-war shots of wrecks, many of which I have never seen before. As you would expect with a work like this, there are a mass of scale plans, all of which are to 1/48th scale and fold-out. The versions therefore offered are; Bf 109B, Bf 109D-1, Bf 109E-0, Bf 109E-1, Bf 109E-4/trop and Bf 109T-1. At the back of this title there are eight pages (plus the cover) of colour artwork. This includes side views of the B through to the G-14 and there are even four sets of five-view images.

This is an excellent title and one I can recommend to all, regardless of the Polish text. The scale plans and mass of photographs make it a great information source, and the colour artwork is another bonus feature.

Our thanks to AJaKS for the review sample.

P-38 Lightning Part 1

P-38 Lightning Part 1
by Bert Kinzey
Price: £10.95
Publisher: Squadron/Signal Publications, 1115 Crowley Drive, Carrollton, TX 75011, USA
UK Importer: Pocketbond Ltd (see Advertisers Index)



This is the first part in a two-part coverage of the P-38 and is offered in the usual Detail & Scale format of 80 pages with a laminated card cover.

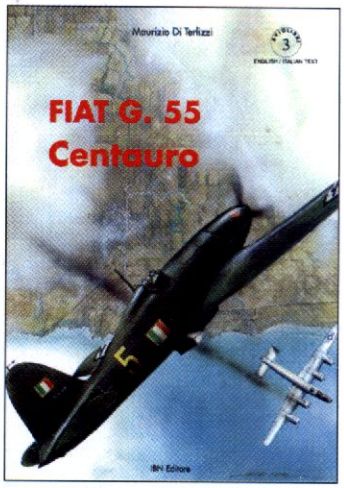
This first part looks at the XP-38 through to the P-38H and therefore begins with a look at the development history of the P-38 design. The next chapter starts the look at each variant with the XP-38, and includes a set of 1/72nd scale drawings of this machine. Next comes the YP-38 and there is an excellent selection of black and white detail pictures inside (and out) of this prototype. Once again 1/72nd scale plans of this version are included. The 'British Lightning' and P-322 come next (remember the Aardvark Creations conversion last month?) and 1/72nd scale plans of the P-322-I and P-322-II are included. The P-38-L0 is next, although by this point you have reached the colour pages in the centre of the title. These offer colour side views of twelve machines (three pages), plus two pages of period colour photographs, a two-page spread on the P-38s that were recovered from Iceland and then ten pages of detail colour photographs of the P-38F-1 that was recovered from the ice and is currently being fully restored. The narrative now returns to the P-38D and once again there are detail interior photographs and 1/72nd scale drawings. The P-38E and F-4 are next, and these too get lots of detail interior photographs and scale plans. The P-38F and F-4A are next (scale plans included) and these are followed by the P-38G and F-5A which only contains a 1/72nd scale view of the main pod of the F-5A. The P-38H is the last variant covered and this is followed by the first part of the coverage of models of the P-38. This only deals with the versions up to the P-38H, and covers all scales.

Overall this is another very good title in the Detail and Scale series. The format is well established and works for both modeller and aviation historian. The level of detailed photographic coverage in this title will make it a 'must' for all P-38 and USAF fans, and I am sure anyone considering making a P-38 should really consider it also.

Our thanks to Squadron/Signal Publications for the review sample.

Fiat G.55

Fiat G.55 Centauro
by Maurizio Di Terlizzi
Price: 18,500 lir
Publisher: Instituto Bibliografico Napoleone sas, Via dei Marsi 53/55, 0185 Roma, Italy
Tel: 06/44 69 929 Fax: 06/44 52 275
Email: aviolibr@etr.it



This title is a follow-on from the Hughes 500 series title we reviewed in the December edition (See Vol 4 Iss 12 Page 804). This title is in a similar (A5) format with 64 pages and a laminated card cover.

The narrative text and photo captions are in both English and Italian. The first 18 pages of text give a brief outline to the origin and use of the G.55 design. This is followed by an excellent section looking 'technically' at the type. It is here that you get a number of detailed (colour) interior pictures of the Serie I G.55 that was restored by GAVS in Italy. Technical details of the exterior of the type, including flaps, undercarriage etc. are covered and there is also a set of 1/72nd scale plans. The next chapter deals with the camouflage and markings applied to the G.55 and this chapter includes six nice colour side views of various machines. The next chapter looks, from a modeller's viewpoint, at the type, with the RCR resin kit in 1/48th, the MisterKit example in 1/72nd and the SMER 1/50th scale example all being built and discussed. Of course at the time this title was produced the excellent new Classic Airframes example was not available, but this title is a real 'must' if you have the Classic kit to build. The appendices at the back of the book include a listing of all kits, accessories and decals suitable for the Fiat G.55, a colour cross-reference chart (with reference to the Gunze, Testors, Xtracolor, Humbrol and MisterKit paint ranges) and a complete bibliography.

Overall, this is another excellent title from IBN and one which all Italian A.F. fans will want to have. The release of the new Classic Airframes kit makes this title perfectly timed and the excellent interior and exterior details, plus the colour references should leave you in no doubt about this machine.

Our thanks to IBN for the review sample, and the next title in this series will be on the Reggiane Re.2005.

The F-4E Phantom II 'Kurnass'

The F-4E Phantom II 'Kurnass'
by A. Dor
Price: 28,000 lit
Publisher: AD Graphics, Via Castelvetro 20, 20154 Milano, Italy
Tel: + 39 + 02 5681 4553
Fax: +39 + 02 5740 1847
Email: amos@adgrafica.com

This is the first title in a new series entitled 'The IAF Aircraft Series'. The book comes in an A4 format with 32 pages and a laminated card cover. All of the contents are in colour.

The narrative introduces you with brief details of the Phantom, technical specifications and details of the Phantom (Kurnass) in IAF service. This is followed with looks at the squadrons that operated the type and includes:

- 'One' Squadron,
- 'Hammer' Squadron
- 'Bat' Squadron
- 'Knights of the Orange Tail' Squadron
- 'Scorpion' Squadron

Each of these is well illustrated with colour photographs and excellent colour artwork depicting a number of Phantoms operated by each squadron.

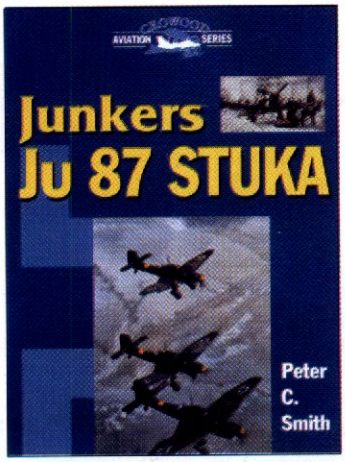
The narrative now looks at the use of the Phantom in the 'Attrition' war (1969), between the war, the 'Yom Kippur' war, after the war and the 'peace of Galilee' war. The final item covered in the title is the upgrade carried out on the Phantom to create the 'Kurnass 2000' (see Eagle Design's conversion reviewed elsewhere), and this is followed by colour chips that relate to the Kurnass in IAF service.

Overall, a very good title and one which will appeal to all IAF fans. The colour photographs and artwork are excellent and I am sure that this new series will be well received. Future releases in this series will be on the A-4 Skyhawk and the Mirage/Kfir.

Our thanks to AD Graphics for the review sample.

Junkers Ju 87 Stuka

Junkers Ju 87 Stuka
by Peter C. Smith
Price: £25.00
Publisher: The Crowood Press, Ramsbury, Marlborough, Wiltshire. SN8 2HR

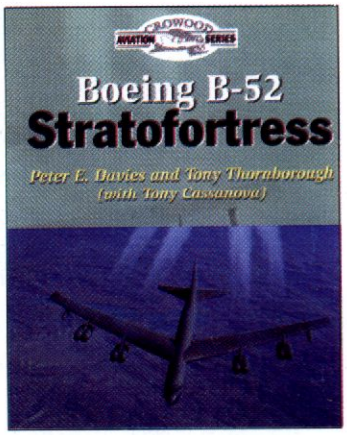


This is the latest title from The Crowood Press and it comes as a hardback (A4) title with 240 pages of contents, none of which is in colour.

As with all titles in this publishers series, the narrative deals with the background, development and operational use of the subject aircraft. With this title the whole origin of the dive-bomber concept is dealt with first, looking at such types as the Junkers A48, along with the influence of America, Sweden and, of course, Ernst Udet. The next chapter looks at the Ju 87 itself, with details of all the prototypes and a look at rival designs such as the Ar 81 and BV Ha 137. The production types are covered next with the 'Anton' (A) variant and its use by the Condor Legion. Next is the 'Berta' (B) version, and again its use in Spain is mentioned. The 'Caesar' project, for the sea-borne version is covered next and this chapter includes clear pictures of the wingfold mechanism in this version. Operational use of the Stuka comes next, and in the next few chapter the type's use in Poland, Norway, Belgium, Holland and France is covered. Specific actions such as the 'Channel Battles' around Boulogne, Calais and Dunkirk are also covered. Next is the use of the Stuka over England, with the initial strikes against convoys in the Channel and then, the Battle of Britain. Use of the Stuka in the Mediterranean is covered next, with the attacks on Malta, and this is followed with a look at the Stuka in Yugoslavia, Greece and Crete. Operations against Russia are the next topic to be covered, and this is followed by a look at the type's use by the Italian Air Force, and other Axis powers. Returning to the variants, the next chapter looks at the 'Dora' (D) variants, and here of course there are close-up details of the G version currently on display at the RAF Museum, Hendon (as it was originally a D-5 converted to a G-2). Back to operational use, the next theatres covered are North Africa and Malta, the Eastern Front. By this time the Axis forces were on the defensive, so the operational reports deal with Tunisia, the Balkans, the Aegean and Italy, as the tide of war turned against Germany and her allies. By this late stage, the next version of the Stuka arrives and this is covered in the next chapter. The 'Gustav' (G) variants were all rebuilt from D series airframes and the Flak 18 armed G-2s are famed for their anti-tank role. The operational use of the tank buster Stuka in Kursk is covered next, along with the retreat of the German forces in Europe towards the end of the war. Towards the back of the title there is a chapter dealing with experiments and special 'one-off' Stukas, including the Ju 87E and F , the Ju 187, Ju 287 and the Dobbas transport pod. The next chapter deals with the Stuka on the Eastern Front, and no record of the Stuka use can be complete without a look at Hans-Ulrich Rudel. This is followed with a look at the type's use as a night bomber, and finally a look at the Stukas that have survived.

Boeing B-52 Stratofortress

Boeing B-52 Stratofortress
by Peter E. Davies and Tony Thornborough (with Tony Cassanova)
Price: £29.95
Publisher: The Crowood Press (address elsewhere)

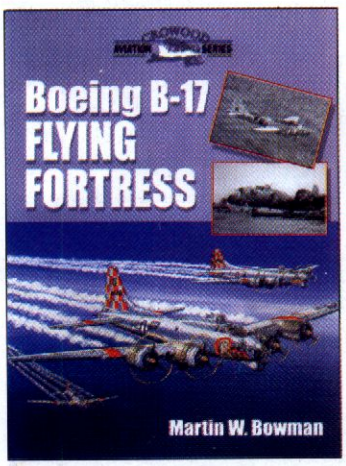


Once again this is an A4 hardback title with 176 pages, eight of which are in colour.

The narrative starts with the development of the B-52 with the XB-52 and YB-52 prototypes. The evolution of the design and the various updates made to the type during its early operational use are all covered, and this includes such things as the tail gun configuration and the use of the third NA-52 as the X-15 mother-ship. The next chapter deals with the G and H versions and includes details of the ADM-20 Quail that could be carried by a B-52, as well as operational requirements such as the Cuban Crisis. Operational use in Vietnam is covered next and this is followed with a look at the 'Linebacker I' and 'II' configuration. Special roles for the B-52 are also covered, along with the SIOP mission and all the new associated equipment that has been installed into the B-52 to meet a number of new combat roles. The final two chapters in this title look at the type's use in the Gulf War and the winding down in the use of the B-52 within the USAF. The final items in this title include a listing of B-52 production, B-52 units, named B-52s, a listing of B-52 deployments to the UK and notes on B-52 colour schemes

Boeing B-17 Flying Fortress

Boeing B-17 Flying Fortress
by Martin W. Bowman
Price: £25.00
Publisher: The Crowood Press (address elsewhere)

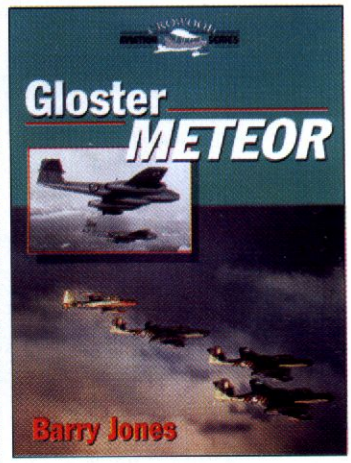


This latest addition to the Crowood series is in a hardback, A4 format with 192 pages, none of which are in colour.

It is not surprising to find Martin W. Bowman doing a title on the B-17, as I am sure you will have come across his work in connection with the USAF before. This title starts with a look at the design and development of the Model 299, which led to the B-17. This is followed by a chapter that looks at the B-17C's adoption by No. 90 Squadron (RAF) and then one which looks at the use of the B-17 by the USAAF in the South Pacific during the 1942-3 period, including the attack on Pearl Harbour. European Theatre of Operations in the 1942-1943 period are covered next, with the deployment and operational use of the B-017 in England. The 15th Air Force's operations in Italy in the 1943-1945 period are covered next and this is followed by the late 1943 to 1944 period of operations in the ETO. The next chapter takes a look at 8th Air Force operations from August 1944 to May 1945 and this includes the dropping of food aid into Europe after the end of hostilities. RAF Coastal Command and 100 Group use of the Fortress are covered in the next chapter and this includes some nice shots of black 'Forts' with 'Piperack' installations. The final chapter takes a look at the type post-war, with the XB-38, PB-1W, Early Warning and ASR duties, drone operations and fire bombing all being covered. The appendices at the back of this title include a number of equipment diagrams from the B-17 (very useful), a listing of B-17 crew members who have received the Medal of Honour and a complete listing of preserved B-17s around the world.

Gloster Meteor

Gloster Meteor
by Barry Jones
Price: £29.95
Publisher: The Crowood Press (address elsewhere)



This title is in the same format as the previous example, although its 190 pages do include eight in colour.

The narrative deals with the history of the Gloster fighter and the development of the jet engine. The E.28/39 is covered next and this leads to the Meteor itself. The operational use of the type is covered next, with its adoption of the type by the RAF. The F.3 and F.4 are covered next, along with the records set by the type. The centre pages are in colour, and they contain a mass of photographs from Mike Hooks. The two-seat examples of the Meteor are covered in the next chapter and this is followed by a chapter looking at the F.8. The FR.9 and PR.10 are covered next. Armstrong-Whitworth night fighters are covered next, along with drone and target-tug operations with the Meteor. Engine test-bed Meteors are covered next, and this is followed by a chapter dealing with trials and research Meteors. In this section you of course come across ejection seat trial work with the likes of Martin Baker. The final chapter looks at the foreign service of the Meteor and this is followed by appendices dealing with production and serial number allocation, squadrons and a listing of preserved examples.

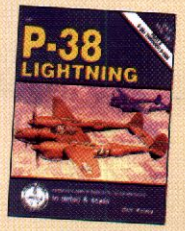
Overall, each of these titles from Crowood is up to the usual high standards we have all become accustomed to from them. Each title reviewed here can be recommended and I am sure that many of you will want to add one (or more) of them to your library shelves.

Our thanks to The Crowood Press for the review samples.

Bookshelf Update

Detail and Scale

The most recent addition to this popular series is the second part of a series looking at the Lockheed P-38 Lightning. This 80 page title deals with the P-38J through to the P-38M and it should be in the UK by the time you read these words.



Check out the Pocketbond advert elsewhere for availability and prices.

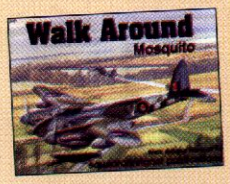
Albatros Productions

Due for release in January 1999 will be Windsock Datafile 73, which will deal with the Friedrichshafen F.33E.

This will be followed by similar titles on the RAF FE8 (March), AGO C.II (May), Martinsyde F.4 Buzzard (July), Albatros C.VII (September) and Caproni Ca. 3 (November).

Squadron/Signal

The latest in this publisher's 'Walk Around' series has been released and it deals with the De Havilland Mosquito. The title is in the usual landscape A4 format with a 50/50 colour/mono coverage. Most of the detail photographs inside are of preserved examples in the UK, with the Prototype (Salisbury Hall), NFII (Bruntingthorpe) and B.35's (Salisbury Hall and RAFM) being the main sources.



Overall this is a neat coverage of a beautiful aircraft which is only limited by the variants that are currently preserved and we will bring you a full review of it next month. In the meantime, copies are available at £12.99 from most specialist bookshops, or directly from the UK importer (Pocketbond Ltd).

Tac-Air Publications

You may recall the excellent 'Air Intelligence' titles from this source that we reviewed a while ago (See Vol 4 Iss 9 Page 610). Well, it seems that the web site mentioned was incorrect and should have read http://tacair-press.com.

Thanks to Warren Brant for pointing this error out.

Ventura

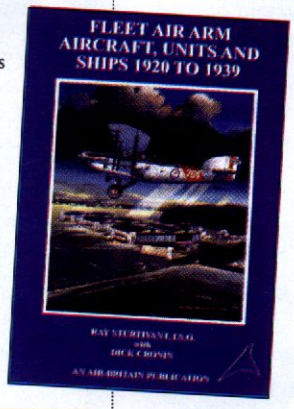
A new title from this publisher, entitled 'American Spitfires - Camouflage and Markings Part 1' has just arrived in the UK. This title is in an A4 format with 72 pages with a laminated card cover and eight pages of colour profiles. The UK price is £7.95 and we hope to bring you a full review on this title once we have received a sample.

Fleet Air Arm Aircraft: 1920-39

Fleet Air Arm Aircraft, Units and Ships: 1920 to 1939
by Ray Sturtivant I.S.O. and Dick Cronin
Price: £32.50
Publisher: Air-Britain (Historians) Ltd., 19 Kent Road, Grays, Essex. RM17 6DE
Fax: 01732 838968 or 811856

This is the latest title from Air-Britain and is is a hardback, A4 format with 432 pages, of which sixteen are in colour.

This is a real wealth of information, and it deals with all aircraft, units and ships of the FAA from 1920 to 1939. The first chapter deals with British naval aviation in the 1920-1939 period and this is followed with a look at catapult aircraft in the Royal Navy. The sixteen page colour section is included at this point and the artwork, created by M.D. Howley, offers computer-generated colour side views of no-less than 115 aircraft. Naval aircraft markings are dealt with in the next chapter and this is followed by a description chapter taken from extracts of Rear Admiral A.D. Torlesse's journal for the operations of No. 446 Flight in the 1928-30 period. From this point the title takes a look at all the flights, breaking them down into groups. The first chapter deals with those in the 400-series and then Flights and Squadrons in the 700-series. The next chapter deals with a complete listing, by type, of the aircraft operated by the FAA in this period. This lists a mass of types and each has entries for each machine, with details of its use etc. The next section deals with experimental marine aircraft (laid out in the same format as the previous section) and this is followed by a listing of FAA Flights and Squadron markings for those that were aboard carriers in the 1923-1939 period. 400-series Flight codes are next, followed by a similar listing for 800-series Squadrons, catapult Flight codes, planned renumbering of FAA aircraft (1935), two-letter coding system (1936-1937) and aircraft code allocations (1923-1939). By this stage you are 300 pages in, and the next chapter deals with Aircrew Courses, with listings for 1921, 1924, the Observers Mates Course of 1935 and the Telegraphist Air Gunners Course of 1922. A complete index of names appears next and this is followed by a look at aircraft carriers and their service. Aircraft-carrying warships are next, with a full listing and service career. The final item is a Glossary and a list of credits.



Overall this is a title which offers a mass of information and will therefore be of great interest to the historian. The title also has appeal to the modeller, as the excellent details assist in choosing a topic and the numerous black and white photographs are of great help in getting details and markings correct.

If you like the subject and you want a one-point reference source on it, then this is the one you need. It is a a big book in both physical form and in the information it offers, you will not be disappointed by this one!

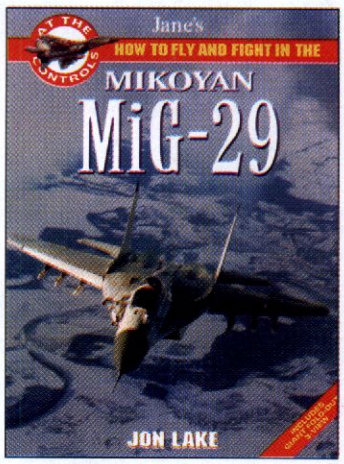
Our thanks to Air-Britain (Historians) Ltd for the review sample.

Jane's How to Fly and Fight

Jane's How to Fly and Fight in the Mikoyan MiG-29
by Jon Lake
Price: £12.99 ($18.00)
Publisher: HaperCollins Publishers (address elsewhere)

This title comes in an A5 format with 96 pages and a laminated card cover.

Now I am sure you will all realise that this is not a flight manual, and basically what the series does is show you what each subject is like, and how to fly it, but only in general terms! This title looks at the Fulcrum and within the covers you will find a mass of clear colour photographs inside and out of the type. There is a chapter that looks at the design of the MiG-29, with clear diagrams showing the early types (Prototype 9-01, 9-12 'Fulcrum A', 9-13 'Fulcrum C' and MiG-29S). The next few chapters deal with the type's 'mission' with a look at how the type is armed and what type of missions it will undertake. In the centre pages there is a nice fold-out spread offering colour artwork of a Fulcrum A in Russian A.F markings. A basic diagram of the Fulcrum A cockpit is included and then you return to the narrative, which now takes a viewpoint from a USAF fighter pilot's flight in the type. The final sections look at the users of the Fulcrum, along with the future variants. It is in this chapter that a clear colour photograph of the MiG-29M cockpit appears (very useful) and there are once again diagrams looking at 'advanced' variants (MiG-29M, MiG-29K, MiG-35 and MiG-29SMT), although with the latter variants you should know that the enlarged spine of this type is not shown properly in the accompanying diagram.



Overall this is a neat and interesting title. I am sure modellers would find it of use, and as we will never get to fly one, it is an interesting insight into the way this frontline fighter works.

Our thanks to HarperCollins for the review sample.

Jane's Historic Military Aircraft

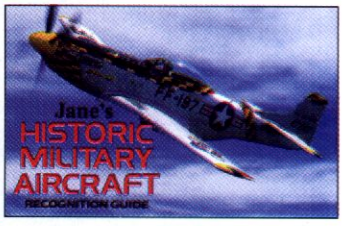
Jane's Historic Military Aircraft Recognition Guide
by Tony Holmes
Price: £14.99 ($22.50)
Publisher: HaperCollins Publishers, 75-85 Fulham Palace Road, Hammersmith, London. W6 8JB
Tel: 0181 741 7070 Fax: 0181 307 4558

This title comes in a rather odd 'pocket' size of 19cm x 13cm, although it has 448 pages of contents and is therefore 3cm thick!

All of the contents are in colour and the title has a laminated card cover.

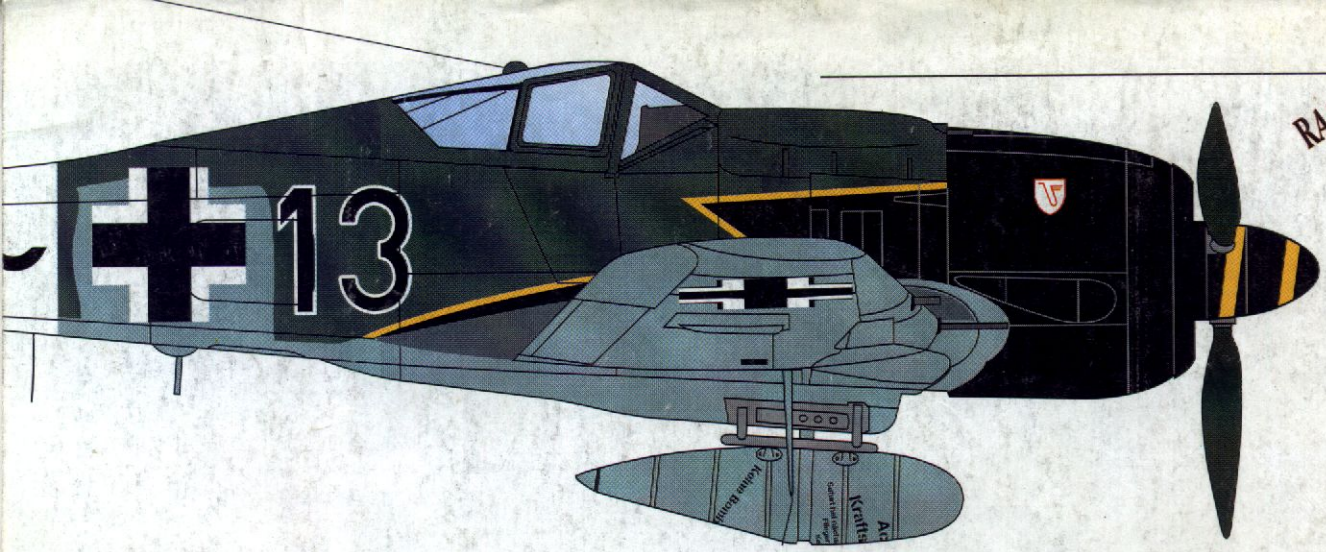
What you basically get is a listing of 'historic' military aircraft and helicopters. Each double-page spread is split into a narrative page, with facts and figures, and a colour photograph of an airworthy example. What you really get is a 'Historic Airworthy Military Aircraft Recognition Guide'.

The coverage begins with the Avro 504 and ends with the Yak-52, so that gives you an idea of the diversity of coverage. The back section of the title also deals with classic helicopters, and once again these run from the Alouette to the Westland Scout.



This is a neat little title, and one I am sure many aviation enthusiasts will want to have. It is certainly generic in its approach and coverage, but overall it is still a very useful one-point reference source for a lot of specific data.

Our thanks to HarperCollins for the review sample.



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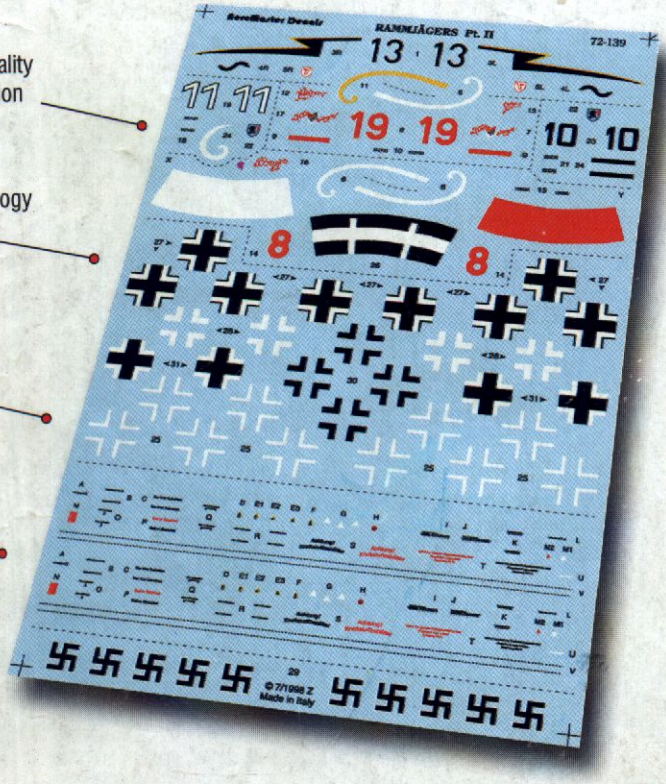

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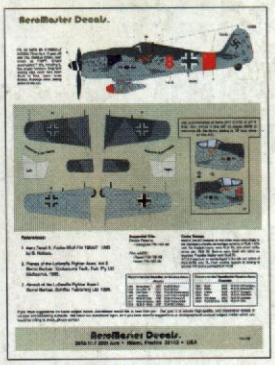

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